ORDER NO. AD9205129C2

Service Manual

Stereo Integrated Amplifier

Amplifier

SU-VX820

Colour

(K) .... Black Type

Areas

Suffix for Model No.	Area	Colour
(EB)	Great Britain.	(K)
(EG)	Europe	

SPECIFICATIONS
(DIN 45 500)

■ MAIN AMP. SECTION

(POWER AMP. DIRECT input)

20 Hz~20 kHz continuous power output	
both channels driven:	2×90 W (8Ω)
1 kHz continuous power output	
both channels driven (THD: 1%):	2×100 W (8Ω)
	2×135 W (4Ω)
63 Hz~12.5 kHz continuous power output	
both channels driven (THD: 0.7%):	2×90 W (8Ω)
	2×125 W (4Ω)
Total harmonic distortion	
rated power at 20 Hz~20 kHz:	0.007% (8Ω)
half power at 20 Hz~20 kHz:	0.005% (8Ω)
half power at 1 kHz:	0.0009% (8Ω)
	0.002% (4Ω)
Intermodulation distortion (50 Hz: 7 kHz=4:1, SMPTE)	
rated power:	0.007% (8Ω)
Residual hum and noise:	0.2 mV
Damping factor:	80 (8Ω)
	40 (4Ω)
Headphones output level/impedance:	635 mV/330Ω
Load impedance	
A or B, BI-WIRING:	4~16Ω
A and B:	8~16Ω

■ PRE AMP. SECTION

Input sensitivity/Impedance	
PHONO MM:	2.5 mV/47 kΩ
MC:	250 μV/220Ω
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT:	150 mV/22 kΩ
POWER AMP. DIRECT:	1 V/18 kΩ
Phono maximum input voltage (1 kHz, RMS)	
MM:	170 mV
MC:	15 mV
S/N (Rated power, 4Ω)	
PHONO MM:	79 dB (86 dB, IHF '66)
MC:	68 dB (68 dB, IHF '66)
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT:	97 dB (100 dB, IHF '66)
POWER AMP. DIRECT:	106 dB (115 dB, IHF '66)
S/N at −26 dB power (4Ω)	
PHONO MM:	77 dB
MC:	67 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT:	84 dB
S/N at 50 mW power (4Ω)	
PHONO MM:	75 dB
MC:	67 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT:	78 dB
Frequency response	
PHONO MM:	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT:	3 Hz~100 kHz (+0, −3 dB) +0 dB, −0.2 dB (20 Hz~20 kHz)
POWER AMP. DIRECT:	3 Hz~120 kHz (+0, −3 dB) +0 dB, −0.2 dB (20 Hz~20 kHz)
Tone controls	
BASS:	50 Hz, +10~−10 dB
TREBLE:	20 kHz, +10~−10 dB
Muting:	−20 dB
Subsonic filter	20 Hz, −12 dB/oct
Loudness control (volume at −30 dB):	50 Hz, + 9 dB
Output voltage	
TAPE 1, TAPE 2/DAT REC OUT:	150 mV
Channel balance, (AUX 250 Hz~6.3 kHz):	±1 dB
Channel separation (AUX 1 kHz):	50 dB

Technics

■ GENERAL

Power consumption:	320 W
Power supply:	AC 50 Hz/60 Hz, 230/240 V
Dimensions (W×H×D):	430×158×429 mm
Weight:	13.4 kg

Notes:
1. Specifications are subject to change without notice.
2. Weight and dimensions are approximate.
3. Total harmonic distortion is measured by the digital spectrum analyzer.

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■ BEFORE REPAIR AND ADJUSTMENT

(1) Turn off the power supply. Using a 10Ω, 10 W resistor, shortcircuit both ends of power supply capacitors (C601, C602) in order to discharge the voltage.

(2) Before turning on the power switch of the unit.

A. Connect the voltage controller to the primary side.

B. Connect the AC ampere meter to the primary side or connect the DC voltage meter to the "±B" circuit of the secondary side.

C. Turn the VR of ICQ (VR451, VR452, VR501 and VR502) to minimum (counterclockwise).

D. After setting the output to zero of the voltage controller, turn on the power switch of the unit.
And increase the output of voltage controller gradually.
Then, check carefully whether the current value of primary side become more than following value or whether the DC voltage of secondary side is increasing slowly.

E. If the value of current is increasing unusually or the DC voltage is not increasing, lower the output level of voltage controller immediately.

- The current value of the primary side at no signal. (Confirm the power supply voltage of each area and provided voltage of the unit.)

Power supply voltage		AC 230 V	AC 240 V
Consumed current	50 Hz	110~210 mA	100~200 mA
	60 Hz		

■ PROTECTION CIRCUITRY

The protection circuitry of the amplifier may have operated if either of the following conditions is noticed:

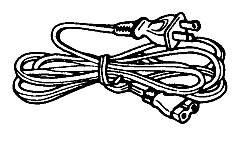
- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlined below:
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again.

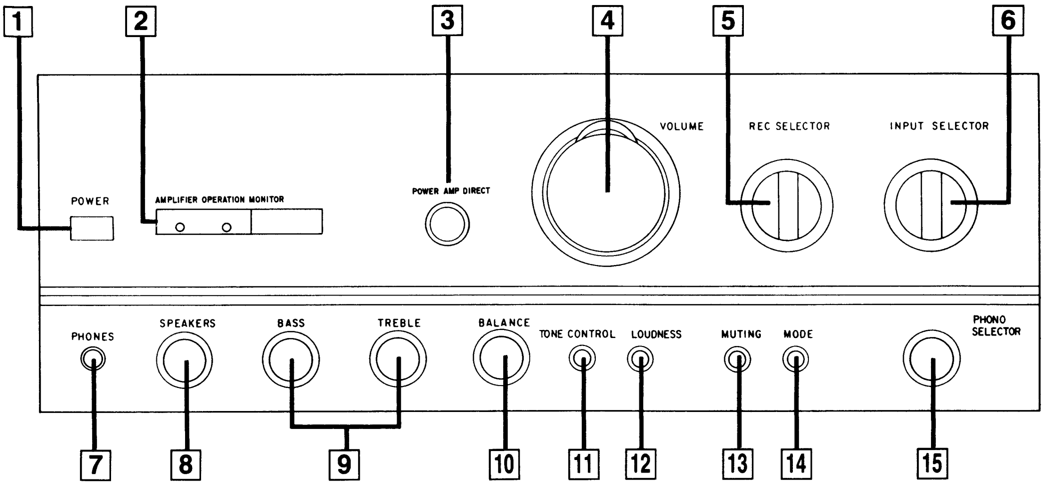
Note:
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ ACCESSORY



- AC power supply cords 1
  <RJA0019-1K> For (EG) area.
  <SJA193> For (EB) area.

■ LOCATION OF CONTROLS



1 Power switch (POWER)

2 Operation indicators (AMPLIFIER OPERATION MONITOR)

These indicators illuminate to indicate the operating condition of this unit.

VOLTAGE CONTROL:
When the power is switched ON, this indicator illuminates when the unit is in the operating condition.

CURRENT DRIVE:
When the power is switched ON, this indicator illuminates after about 4 seconds when the unit is in the operating condition.
If an abnormal condition in the circuitry is detected, such as DC voltage appearing in the output, or a short-circuit of the positive (+) and negative (−) wires from the speaker terminals, the protection circuit functions and this indicator will not illuminate.

3 Power amplifier direct switch (POWER AMP DIRECT)

This switch is used to listen to the sound from a component connected to the "POWER AMP DIRECT" terminals.
When this switch is pressed inward to the "ON" position, a superior level of tone quality can be obtained, because the signals from the component connected to the "POWER AMP DIRECT" terminals are sent directly to the volume control and power amplifier section of this unit. The tone control circuit, balance control, loudness switch, muting switch and mode selector are bypassed.

4 Volume control/indicator (VOLUME)

There are two types of volume scale indications: one for when or the power amplifier direct switch is OFF, and one for when it is ON (Indicator will illuminate.).

5 Recording selector (REC SELECTOR)

This selector is used to select the sound source to be recorded by the connected tape deck 1 and/or tape deck 2 (or DAT).

6 Input selector (INPUT SELECTOR)

This selector is used to select the sound source to be heard, such as a disc, radio broadcast, etc.

7 Headphones jack (PHONES)

8 Speaker selector (SPEAKERS)

This selector is used to select the speakers to be used.

9 Tone controls (BASS/TREBLE)

The bass control is used to adjust the low-frequency sound range, and the treble control is used to adjust the high-frequency sound range.

10 Balance control (BALANCE)

This control is used to adjust the left/right volume balance.

11 Tone control switch (TONE CONTROL)

This switch is used to set the tone control circuit (bass, treble) to ON or DEFEAT.

12 Loudness switch (LOUDNESS)

This switch is used when listening to music at a low volume level. Auditory perception of sound in the low frequency range falls off at low volume, but when the switch is set to the "ON" position, this deficiency is compensated for, so that the full impact of the musical performance can be enjoyed.

13 Muting switch (MUTING)

This switch is used to temporarily reduce the volume level (approx. 1/10).
The effect activates when setting this switch to the "ON" position.

14 Mode selector (MODE)

This selector is used to select stereo or monaural operation.

15 Phono cartridge selector (PHONO SELECTOR)

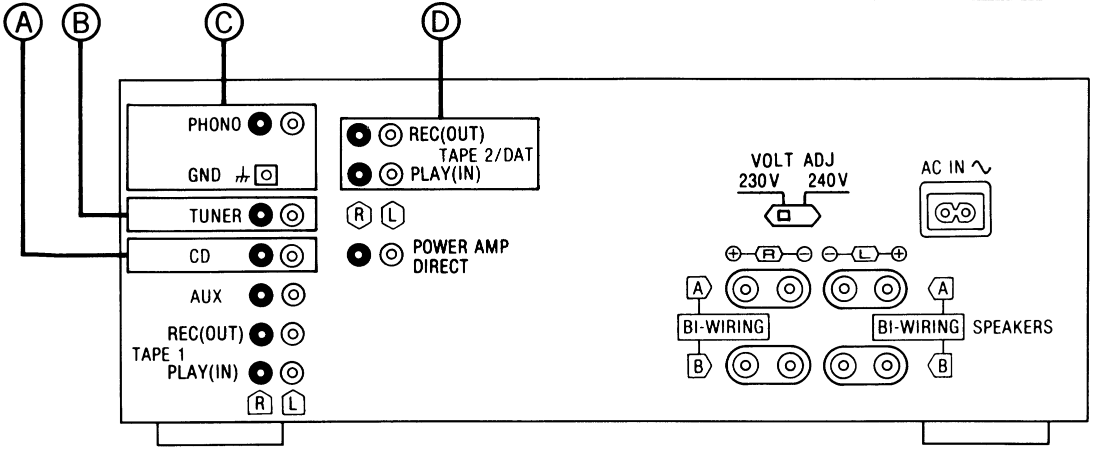
This selector should be set to the position which corresponds to the type of cartridge used on the turntable.
The "SUBSONIC" position is used to eliminate ultra-low-frequency noise such as motor "rumble" and unusual vibration of the woofer cone caused by a warped disc, etc.

■ CONNECTIONS

To connect to each terminals

Make connections to each component in the system by using stereo connection cables (not included).

Stereo connection cable White (L) Red (R)

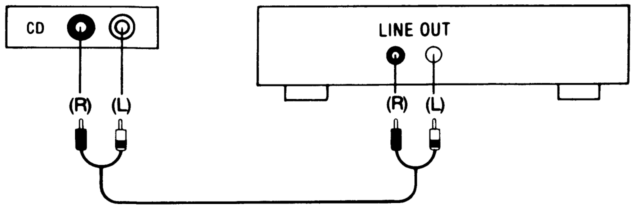

Ⓐ
Ⓑ
Ⓒ
Ⓓ
PHONO
GND
TUNER
CD
AUX
REC(OUT)
TAPE 1
PLAY(IN)
R L
REC(OUT)
TAPE 2/DAT
PLAY(IN)
R L
POWER AMP DIRECT
VOLT ADJ
230V 240V
AC IN ∿
⊕ R ⊖ ⊖ L ⊕
A
BI-WIRING
B
A
BI-WIRING
B
SPEAKERS

•**Phono input capacitance is about 220 pF.**

Ⓐ "CD" terminals

Connect to a compact disc player.

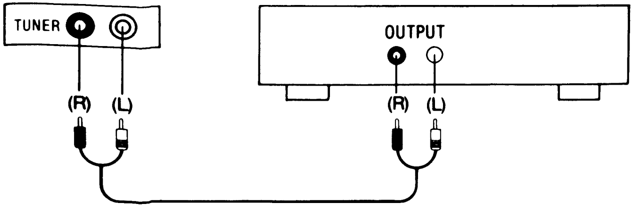
Compact disc player (not included)


CD
LINE OUT
(R) (L)
(R) (L)

Ⓑ "TUNER" terminals

Connect to a tuner.

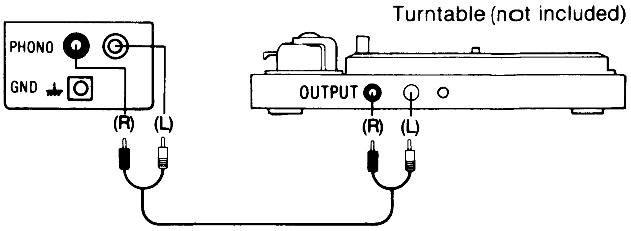
Tuner (not included)


TUNER
OUTPUT
(R) (L)
(R) (L)

Ⓒ "PHONO" terminals

Connect to a turntable.

Turntable (not included)


PHONO
GND
OUTPUT
(R) (L)
(R) (L)

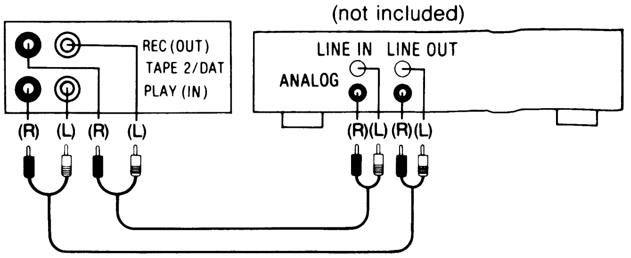
■ "GND" terminal

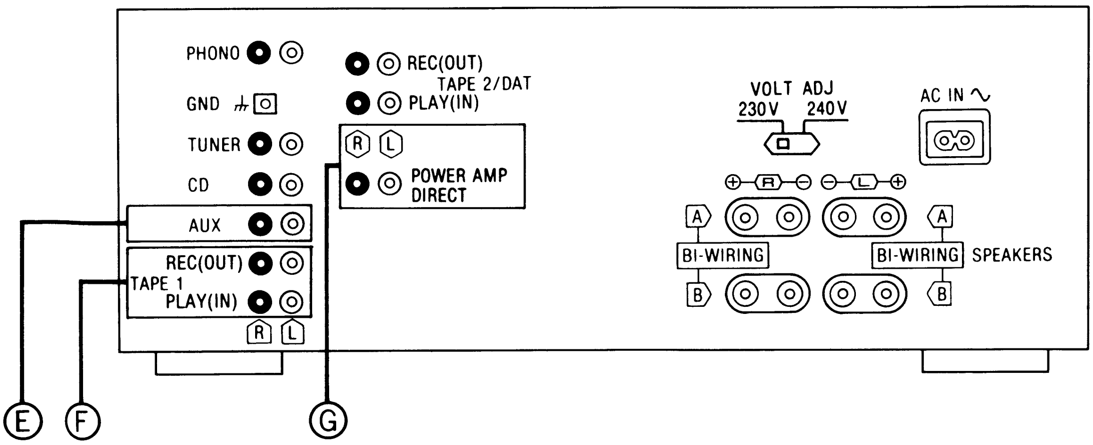
This terminal is for use with a turntable which has a ground wire.

Ⓓ "TAPE 2/DAT" terminals

Connect to a second tape deck or a digital audio tape deck (DAT).

Digital audio tape deck (DAT)
(not included)

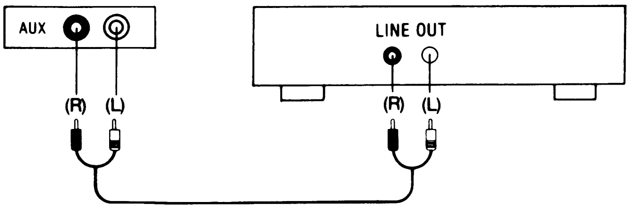

REC (OUT)
TAPE 2/DAT
PLAY (IN)
(R) (L) (R) (L)
LINE IN LINE OUT
ANALOG
(R)(L) (R)(L)


PHONO
GND
TUNER
CD
AUX
REC(OUT)
TAPE 1
PLAY(IN)
R L
REC(OUT)
TAPE 2/DAT
PLAY(IN)
R L
POWER AMP DIRECT
VOLT ADJ
230V 240V
AC IN ∿
A
BI-WIRING
B
SPEAKERS
E
F
G

Ⓔ "AUX" terminals

Connect to a component such as a video disc player (audio only connectable), etc.

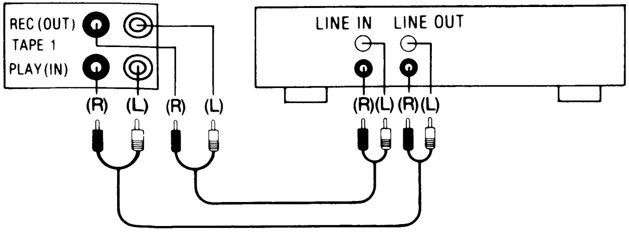
Video disc player (not included)


AUX
LINE OUT
(R) (L)
(R) (L)

Ⓕ "TAPE 1" terminals

Connect to a first tape deck.

Tape deck 1 (not included)


REC(OUT)
TAPE 1
PLAY(IN)
(R) (L) (R) (L)
LINE IN
LINE OUT
(R)(L)(R)(L)

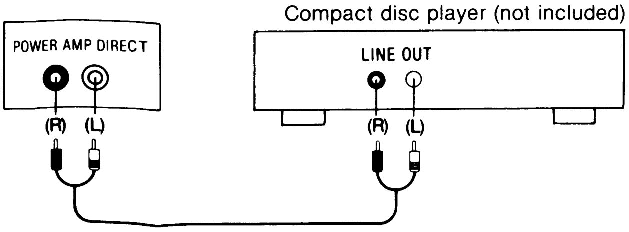
Ⓖ "POWER AMP DIRECT" terminals

Connect to a compact disc player, a digital audio tape deck, or a D/A converter.

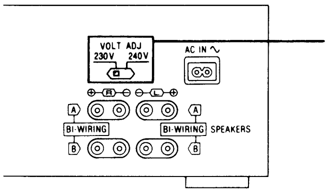
A superior level of tone quality can be obtained, because the signals from these terminals are sent directly to the volume control and power amplifier section of this unit.

The sounds from a component connected to these terminals cannot be recorded.

Compact disc player (not included)


POWER AMP DIRECT
(R) (L)
LINE OUT
(R) (L)

To set the power voltage

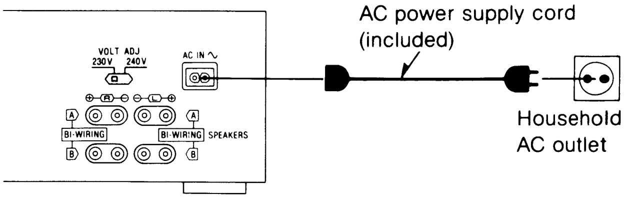

VOLT ADJ
230V 240V
AC IN ∿
BI-WIRING
SPEAKERS

Set the voltage selector to the voltage setting for the area in which the unit will be used.
[Use a minus (−) screwdriver]

Note:
Note that this unit will be seriously damaged if this setting is not made correctly.

To connect the AC power supply cord
(included)

Connect the AC power supply cord (included) after all other cables and cords are connected.


VOLT ADJ
230V 240V
AC IN ∿
BI-WIRING
SPEAKERS
AC power supply cord
(included)
Household
AC outlet

Note:
The configuration of the AC power supply cord differs according to area.

For United Kingdom

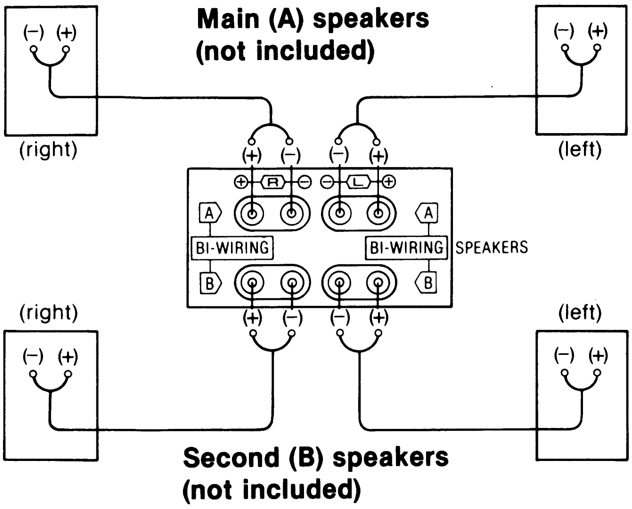
Household AC outlet

Fit a suitable plug to the AC power supply cord.

To connect to speakers

One pair of speakers can be connected to the "A" terminals of this unit and one pair to the "B" terminals, or only one pair of bi-wired speakers can be connected to all terminals.

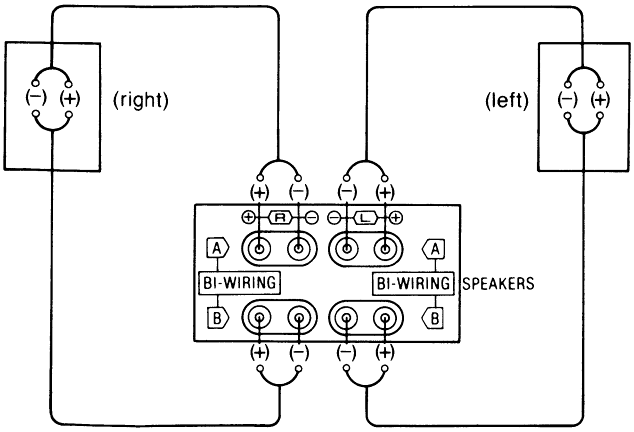
To connect main and/or second speakers


Main (A) speakers
(not included)
(−) (+)
(right)
(left)
(+) (−) (−) (+)
R
L
A
BI-WIRING
SPEAKERS
B
Second (B) speakers
(not included)

■ Load impedance

- When only the "A" or only the "B" terminals are used: 4 − 16 ohms
- When both the "A" and the "B" terminals are used simultaneously: 8 − 16 ohms

To connect bi-wired speakers


(−) (+)
(right)
(left)
(+) (−) (−) (+)
R
L
A
BI-WIRING
SPEAKERS
B

Note: Connect only bi-wired speakers in this way.

■ Load impedance

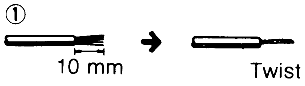
When bi-wired speakers are used: 4 − 16 ohms

■ Bi-wiring

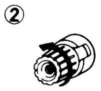
The treble range and the bass range of the speakers are connected to the speaker terminals of the amplifier by using two speaker connection cords separately for each.
As a result of making connections in this way, sound can be reproduced with much greater nuance and detail, with the feelings of air oscillation and deepness of sound provided by an input source that suppresses reciprocal band-range interference.
(Refer to the operating instructions of the speakers.)

To connect cords to terminals

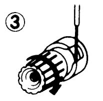
① Strip off the outer covering, and twist the center conductor.


①
10 mm
Twist

② Turn completely to the left.

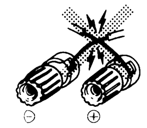


③ Insert the wire and turn completely to the right. Pull the cord to assure a proper connection.



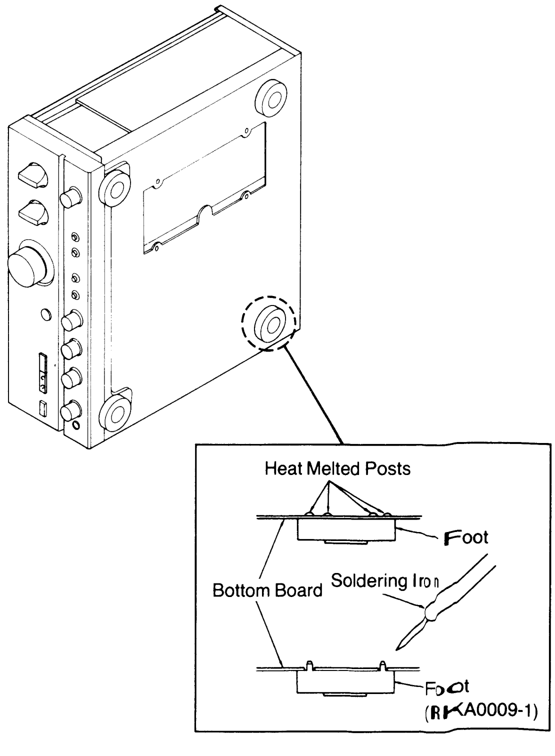
Note: Be sure to only connect positive (+) cords to positive (+) terminals, and negative (−) cords to negative (−) terminals.

Note:
To prevent damage to circuitry, never short-circuit the plus (+) and minus (−) speaker wires.



•Replacement of the Foot

1. Remove the 4 heat melted posts on the chassis with a pair of nippers or similar tool.
2. To replace the foot (RKA0009-1) on the chassis, melt the 4 posts with a soldering iron.


Heat Melted Posts
Foot
Bottom Board
Soldering Iron
Foot
(RKA0009-1)

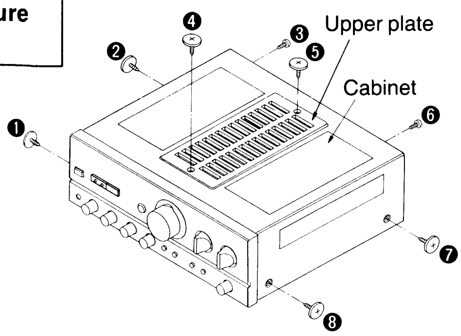
■ DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No.
1

Removal of the cabinet

Procedure
1


❹
❸
Upper plate
❷
❺
Cabinet
❻
❶
❼
❽

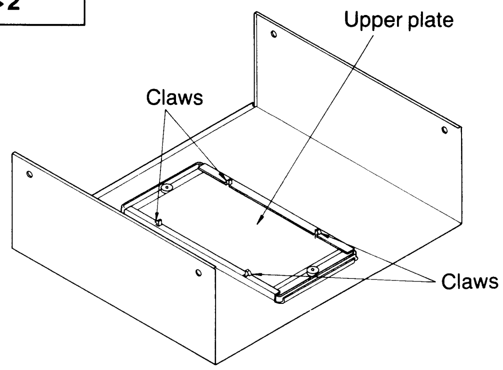
- Remove 8 screws (❶~❽).

Attention:
When removing the cabinet from the unit, please don't forget to remove the 2 screws (❹, ❺) of the upper plate.
Unless you remove the 2 screws (❹, ❺), it may change shape of the cabinet.

Ref. No.
2

Removal of the Upper Plate

Procedure
1→2

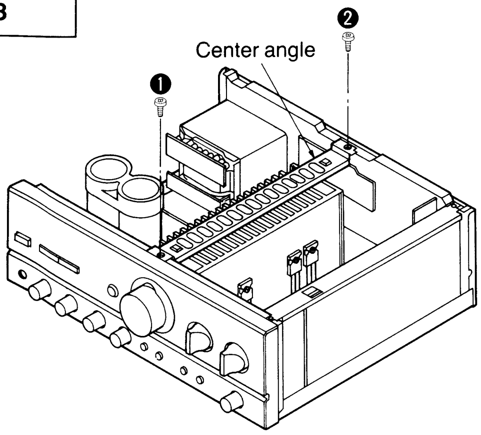

Upper plate
Claws
Claws

- Release the 4 claws.

Ref. No.
3

Removal of the Center Angle

Procedure
1→3

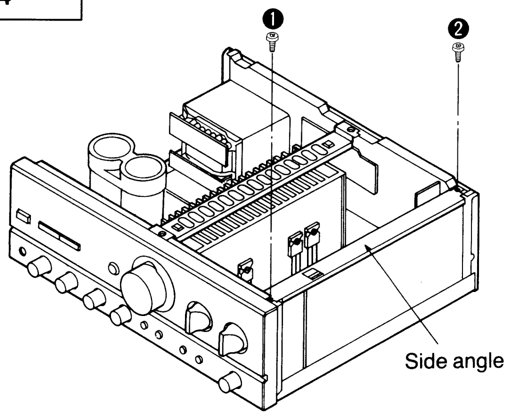

❷
Center angle
❶

- Remove the 2 screws (❶, ❷).

Ref. No.
4

Removal of the Side Angle

Procedure
1→4

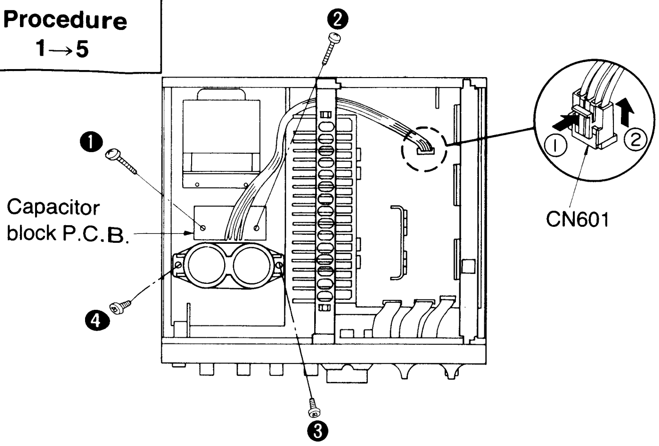

❶
❷
Side angle

- Remove the 2 screws (❶, ❷).

Ref. No.
5

Removal of the Capacitor Block P.C.B.

Procedure
1→5

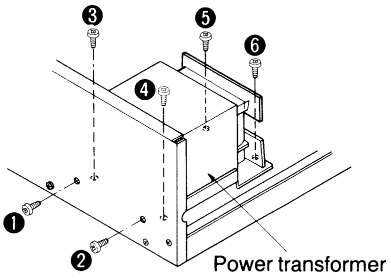

❷
❶
Capacitor block P.C.B.
❹
❸
①
②
CN601

1. Remove the 1 connector (CN601).
2. Remove the 4 screws (❶~❹).

Ref. No.
6

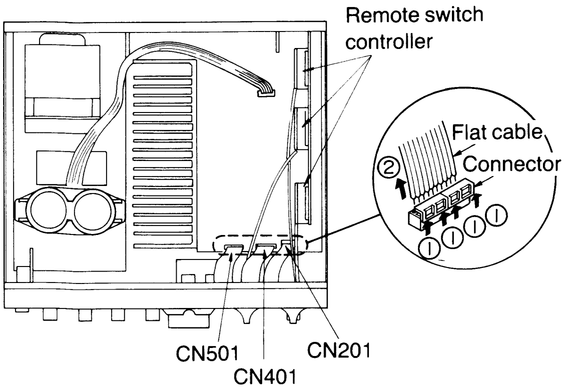
Removal of the Power Transformer

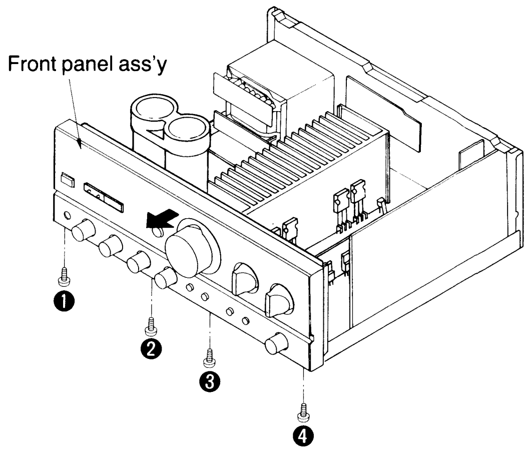
Procedure
1→6


❸
❺
❻
❹
❶
❷
Power transformer

- Remove the 6 screws (❶~❻).

Ref. No. **7**	**Removal of the Front Panel Ass'y**
Procedure **1→3→** **4→7**	


Remote switch controller
Flat cable
Connector
②
①
①
①
①
CN501
CN401
CN201

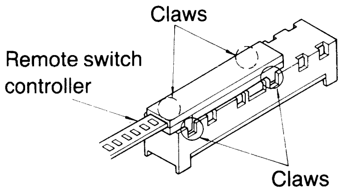

Front panel ass'y
❶
❷
❸
❹

1. Remove the remote switch controller.
2. Remove the 3 flat cables (CN201, CN401, CN501).
3. Remove the 4 screws (❶~❹).
4. Remove the front panel ass'y in the direction of arrow.

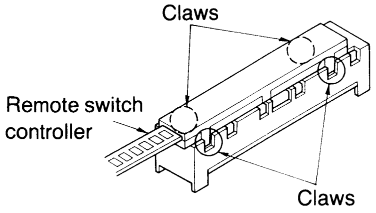
■ Removal of the remote switch controller

- Remove the 4 claws.

S101 (PHONO)

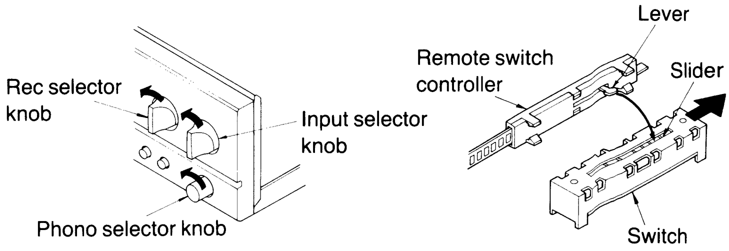

Claws
Remote switch controller
Claws

S102, S103 (REC, INPUT)

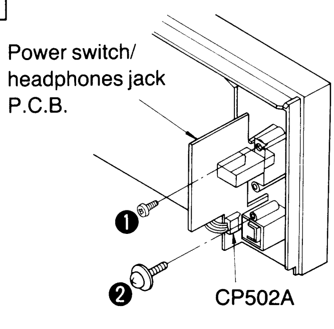

Claws
Remote switch controller
Claws

■ Replacing of the remote switch controller

1. Turn the selector knobs to the arrows.
2. Put the switch slider of switch to end and put in the remote switch controller.

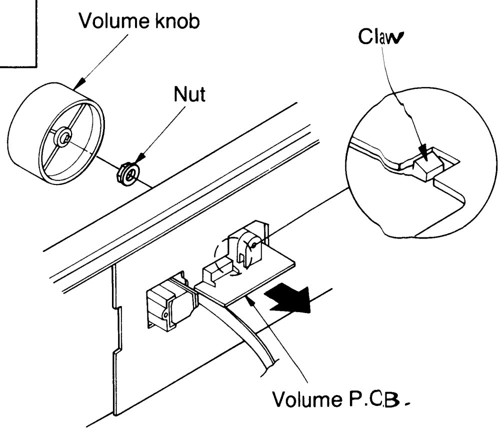

Rec selector knob
Input selector knob
Phono selector knob
Remote switch controller
Lever
Slider
Switch

Ref. No. **8**	**Removal of the Power Switch/ Headphones Jack P.C.B.**
Procedure **1→3→4→** **7→8**	


Power switch/ headphones jack P.C.B.
❶
❷
CP502A

1. Remove the 1 connector (CP502A).
2. Remove the 2 screws (❶, ❷).

Ref. No. **9**	**Removal of the Volume P.C.B.**
Procedure **1→3→4→** **7→9**	

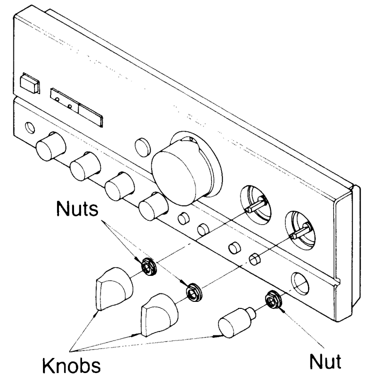

Volume knob
Nut
Claw
Volume P.C.B.

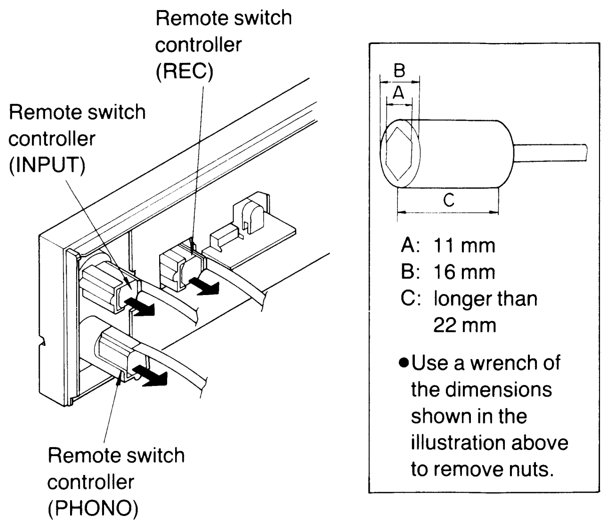
1. Pull out the volume knob.
2. Remove the nut.
3. Release the 1 claw.

Ref. No.
10

Removal of the Remote Switch Controller

Procedure
1→3→4→7→10


Nuts
Knobs
Nut

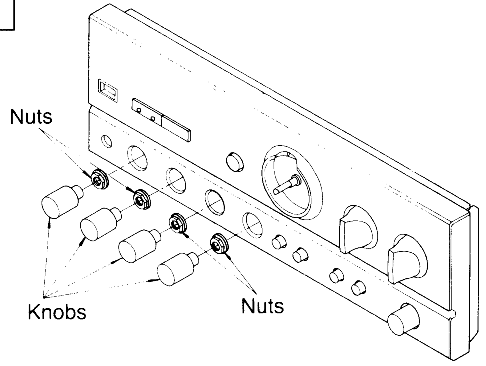

Remote switch controller (REC)
Remote switch controller (INPUT)
Remote switch controller (PHONO)
B
A
C
A: 11 mm
B: 16 mm
C: longer than 22 mm
•Use a wrench of the dimensions shown in the illustration above to remove nuts.

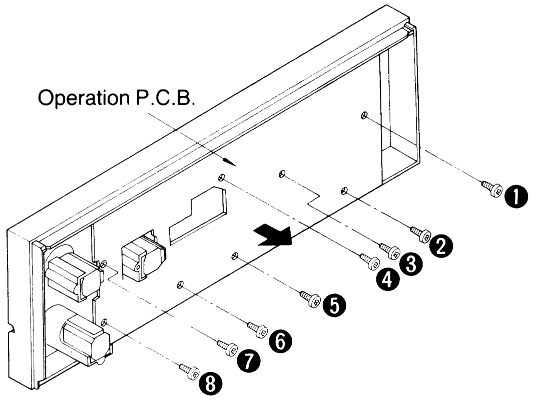
1. Pull out the 3 knobs.
2. Remove the 3 nuts.
3. Remove the remote switch controller in the direction of arrow.

Ref. No.
11

Removal of the Operation P.C.B.

Procedure
1→3→4→7→8→9→11


Nuts
Knobs
Nuts

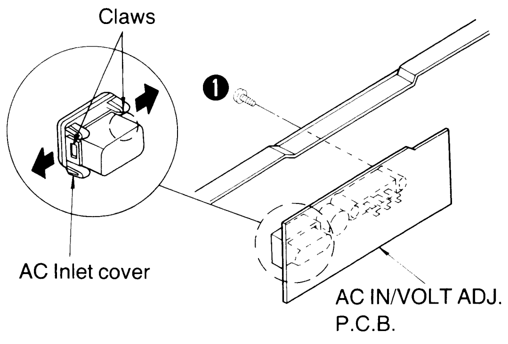

Operation P.C.B.
❶
❷
❸
❹
❺
❻
❼
❽

1. Pull out the 4 knobs.
2. Remove the 4 nuts.
3. Remove the 8 screws (❶~❽).
4. Remove the operation P.C.B. in the direction of arrow.

Ref. No.
12

Removal of the AC IN/VOLT ADJ. P.C.B.

Procedure
1→3→12

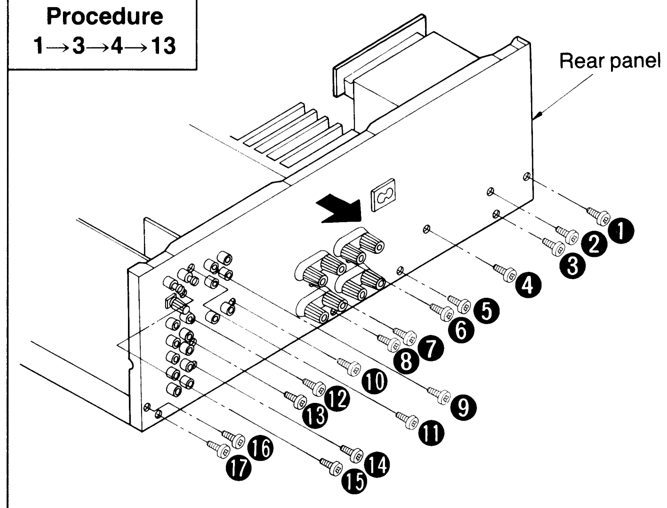

Claws
❶
AC Inlet cover
AC IN/VOLT ADJ. P.C.B.

1. Remove the 1 screw (❶).
2. Release the 2 claws of AC inlet cover.

Ref. No.
13

Removal of the Rear Panel

Procedure
1→3→4→13

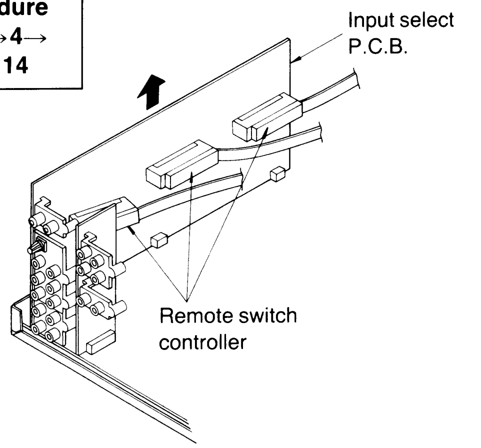

Rear panel
❶
❷
❸
❹
❺
❻
❼
❽
❾
❿
⓫
⓬
⓭
⓮
⓯
⓰
⓱

1. Remove the 17 screws (❶~⓱).
2. Remove the rear panel in the direction of arrow.

Ref. No.
14

Removal of the Input Select P.C.B.

Procedure
1→3→4→13→14

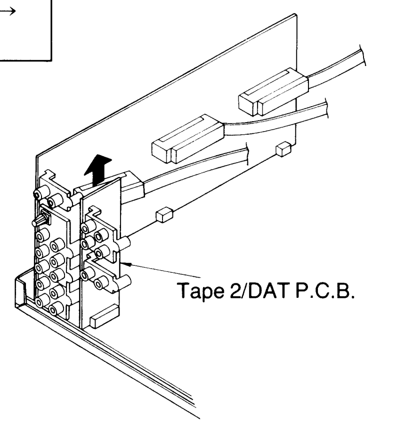

Input select P.C.B.
Remote switch controller

1. Remove the remote switch controller.
2. Remove the input select P.C.B. in the direction of arrow.

Ref. No.
15

Removal of the Tape 2/DAT P.C.B.

Procedure
1→3→4→13→15

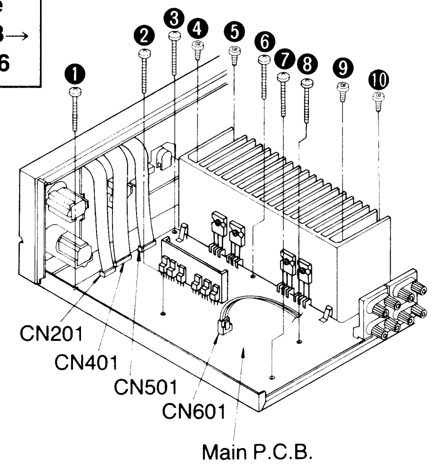

Tape 2/DAT P.C.B.

- Remove the tape 2/DAT P.C.B. in the direction of arrow.

Ref. No.
16

Removal of the Main P.C.B.

Procedure
1→3→4→13→14→15→16

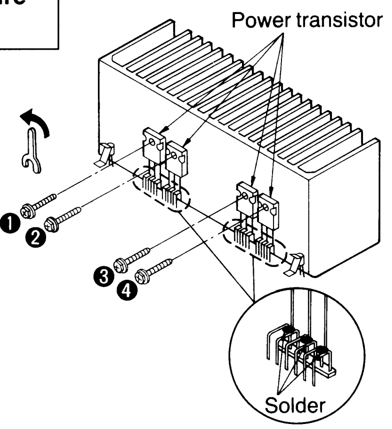

❶
❷
❸
❹
❺
❻
❼
❽
❾
❿
CN201
CN401
CN501
CN601
Main P.C.B.

1. Remove the 3-flat cables (CN201, CN401, CN501).
2. Remove the 1 connector (CN601).
3. Remove the 10 screws (❶~❿).

Ref. No.
17

Removal of the Power Transistor

Procedure
1→17


Power transistor
❶
❷
❸
❹
Solder

1. Unsolder the power transistor.
2. Remove the 4 screws (❶~❹).

- When mounting the power transistor, apply silicon thermal compound (RFKX0002) to the rear of the power transistor.

Ref. No.
18

Check of the Main P.C.B.

Procedure
1→18

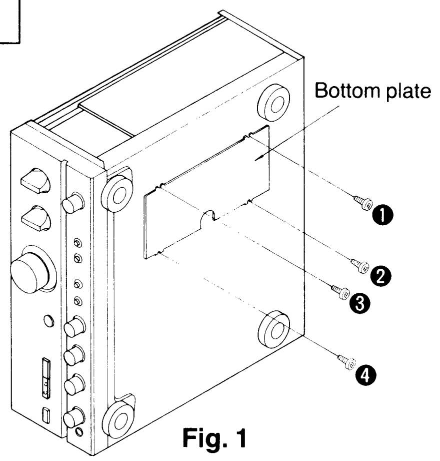

Bottom plate
❶
❷
❸
❹

Fig. 1

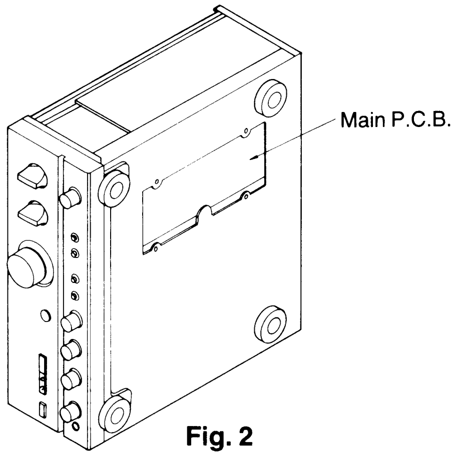
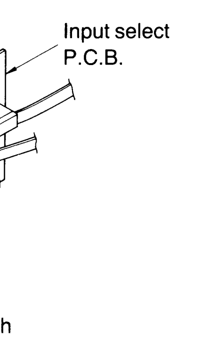


Fig. 2

1. Remove the 4 screws (❶~❹).
2. When checking the soldered surface of the digital P.C.B. and replacing the parts, do as shown in the Fig. 2.

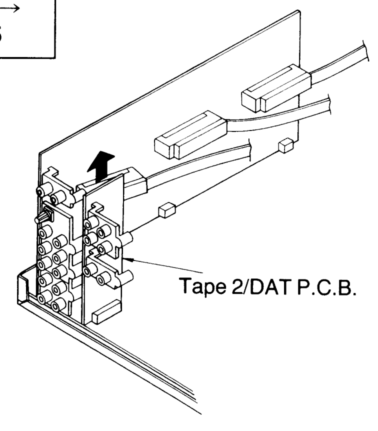
e Input Select P.C.B.


Input select
P.C.B.
h

er.
he direction of arrow.

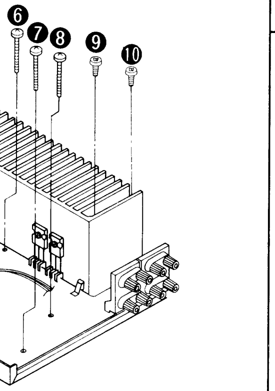
Ref. No. 15 Removal of the Tape 2/DAT P.C.B.

Procedure
1→3→4→
13→15


Tape 2/DAT P.C.B.

- Remove the tape 2/DAT P.C.B. in the direction of arrow.

e Main P.C.B.

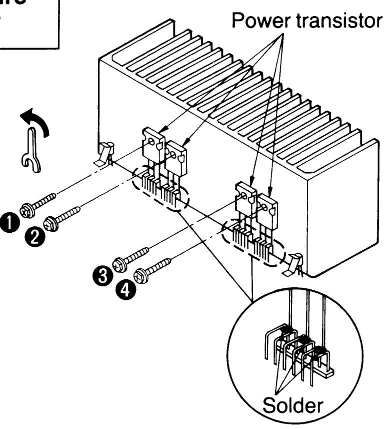


P.C.B.

CN401, CN501).

Ref. No. 17 Removal of the Power Transistor

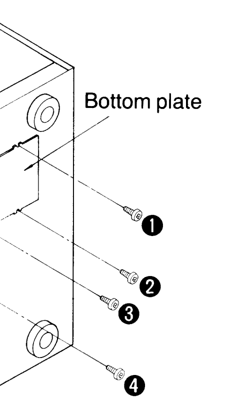
Procedure
1→17


Power transistor
❶
❷
❸
❹
Solder

1. Unsolder the power transistor.
2. Remove the 4 screws (❶~❹).

- When mounting the power transistor, apply silicon thermal compound (RFKX0002) to the rear of the power transistor.

ain P.C.B.


Bottom plate
❶
❷
❸
❹

1

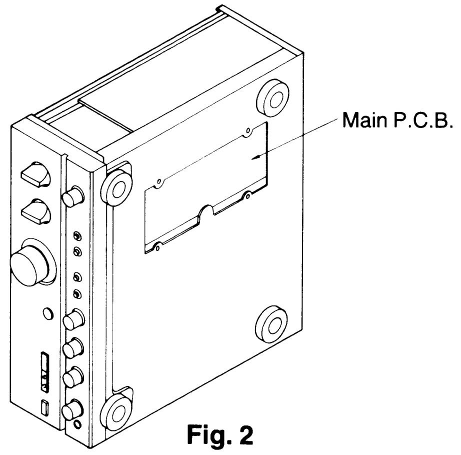


Fig. 2

2. When checking the soldered surface of the digital P.C.B. and replacing the parts, do as shown in the Fig. 2.

■ MEASUREMENTS AND ADJUSTMENTS

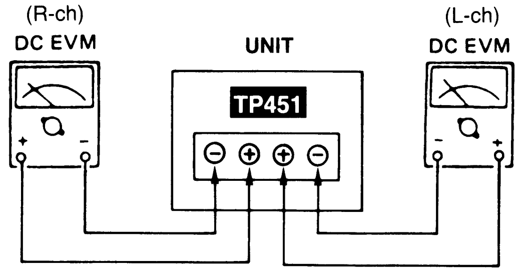
•ADJUSTMENT

Control positions and equipment used.

- Volume knob . . . . ∞ (Minimum)
- Speaker selector . . . . off
- AC and DC electronic voltmeter (EVM)

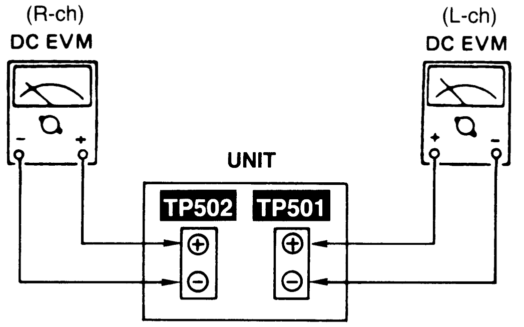
(1) VOLTAGE CONTROL (V) AMP. IDLING (ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (V) amp. adjusting volumes (**VR451, VR452**) counter-clockwise.
3. Turn ON the set when it is cold, and about 8 sec. later, adjust **VR451** and **VR452** so that the voltage is 60 mV.

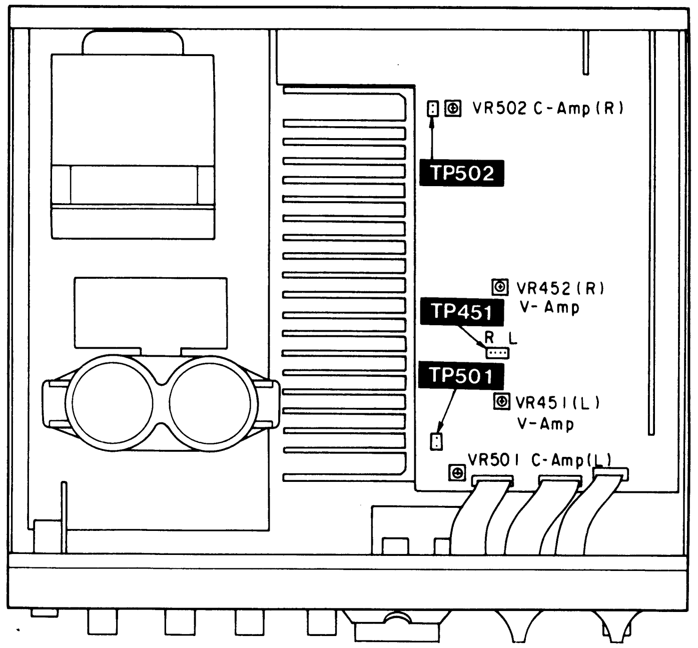

(R-ch)
DC EVM
UNIT
TP451
(L-ch)
DC EVM

(2) CURRENT DRIVE (C) AMP. IDLING (ICQ) ADJUSTMENT

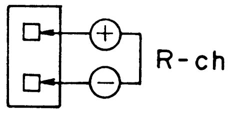
1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (C) amp. adjusting volumes (**VR501, VR502**) counter-clockwise.
3. Turn ON the set when it is cold, and the "VOLTAGE CONTROL (V) AMP. IDLING (ICQ) ADJUSTMENT" later, adjust **VR501** and **VR502** so that the voltage is 2 mV.


(R-ch)
DC EVM
UNIT
TP502
TP501
(L-ch)
DC EVM

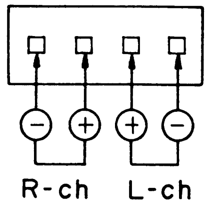
•ADJUSTMENT POINTS


VR502 C-Amp (R)
TP502
VR452 (R)
V-Amp
TP451
R L
TP501
VR451 (L)
V-Amp
VR501 C-Amp (L)

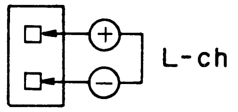
TP502 (C-amp)



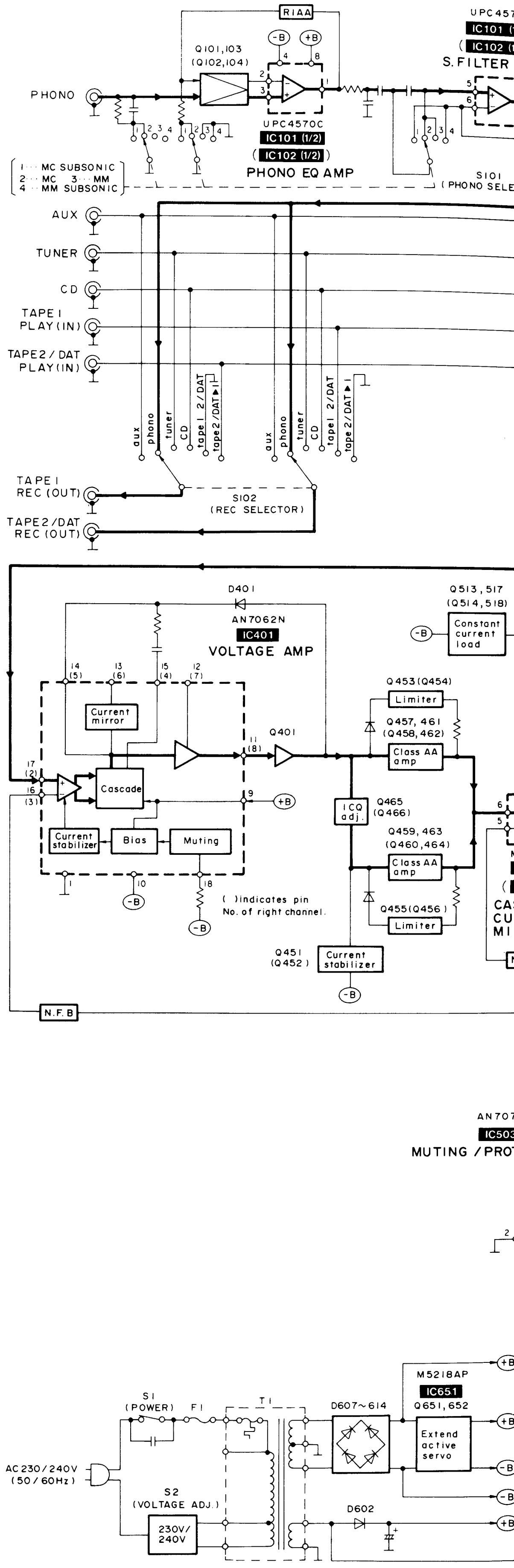
TP451 (V-amp)



TP501 (C-amp)



■ BLOCK DIAGRAM


RIAA
UPC457
IC101 (
IC102 (
S.FILTER
-B
+B
Q101,103
(Q102,104)
PHONO
UPC4570C
IC101 (1/2)
(IC102 (1/2))
PHONO EQ AMP
1 ··· MC SUBSONIC
2 ··· MC 3 ··· MM
4 ··· MM SUBSONIC
S101
(PHONO SELE
AUX
TUNER
CD
TAPE 1
PLAY (IN)
TAPE2 / DAT
PLAY (IN)
aux
phono
tuner
CD
tape1 2/DAT
tape2/DAT ▸ 1
TAPE 1
REC (OUT)
S102
(REC SELECTOR)
TAPE2 / DAT
REC (OUT)
D401
AN7062N
IC401
VOLTAGE AMP
Q513, 517
(Q514, 518)
Constant
current
load
Current
mirror
Cascade
Current
stabilizer
Bias
Muting
Q401
+B
( )indicates pin
No. of right channel.
Q453 (Q454)
Limiter
Q457, 461
(Q458, 462)
Class AA
amp
ICQ
adj.
Q465
(Q466)
Q459, 463
(Q460, 464)
Class AA
amp
Q455 (Q456)
Limiter
Q451
(Q452)
Current
stabilizer
N.F.B
AN707
IC503
MUTING / PRO
S1
(POWER)
F1
T1
D607~614
M5218AP
IC651
Q651, 652
Extend
active
servo
AC 230/240V
(50/60Hz)
S2
(VOLTAGE ADJ.)
230V/
240V
D602

ND ADJUSTMENTS

d.

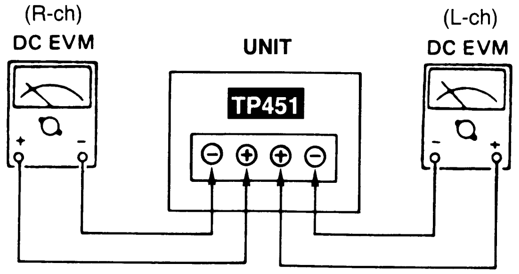
num)
. off

- AC and DC electronic voltmeter (EVM)

. IDLING (ICQ)

shown in figure. (Connect
s.)
adjusting volumes **(VR451,**

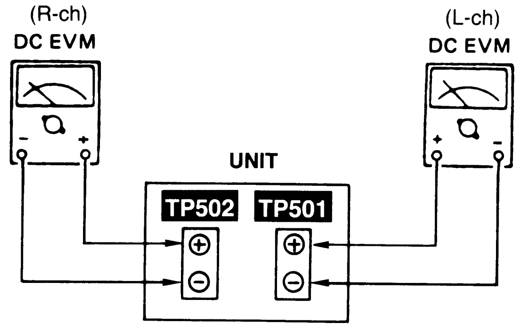
ld, and about 8 sec. later,
that the voltage is 60 mV.

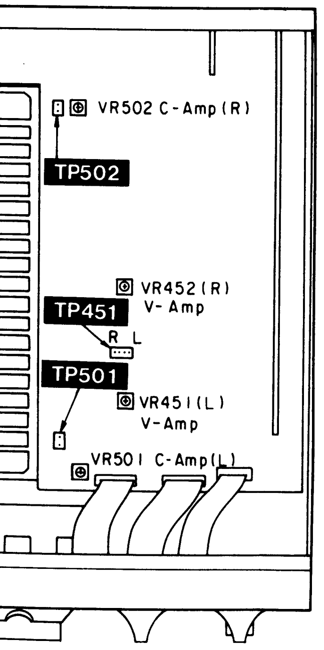

(R-ch)
DC EVM
UNIT
TP451
(L-ch)
DC EVM

DLING (ICQ) ADJUST-

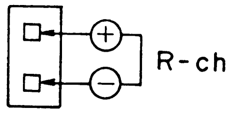
shown in figure. (Connect
.)
djusting volumes **(VR501,**

ld, and the "VOLTAGE
G (ICQ) ADJUSTMENT"
02 so that the voltage is

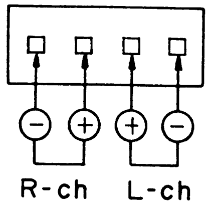

(R-ch)
DC EVM
(L-ch)
DC EVM
UNIT
TP502
TP501


VR502 C-Amp(R)
TP502
VR452(R)
V-Amp
TP451
R L
TP501
VR451(L)
V-Amp
VR501 C-Amp(L)

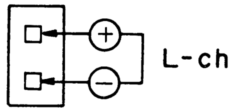
TP502 (C-amp)



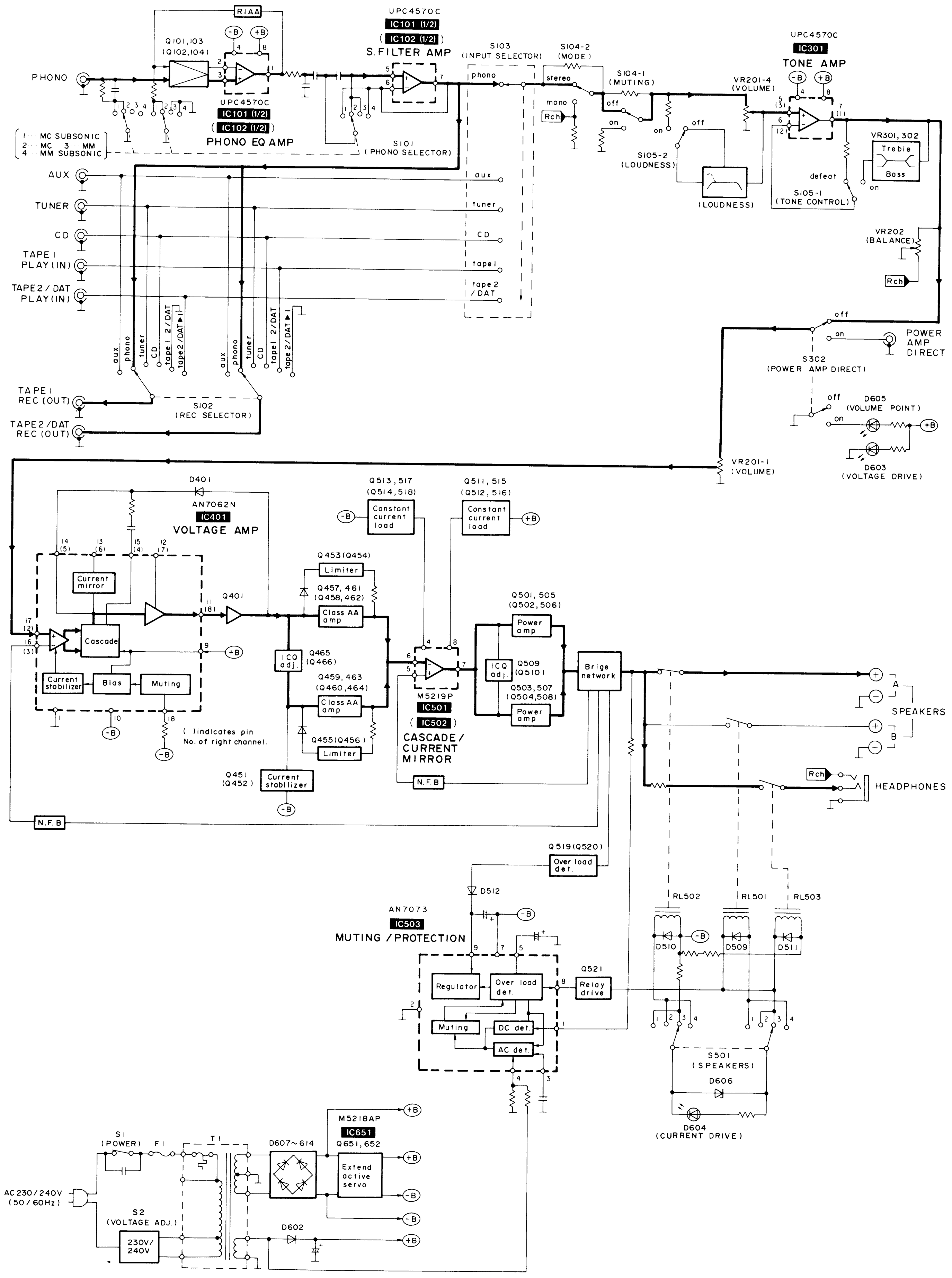
TP451 (V-amp)



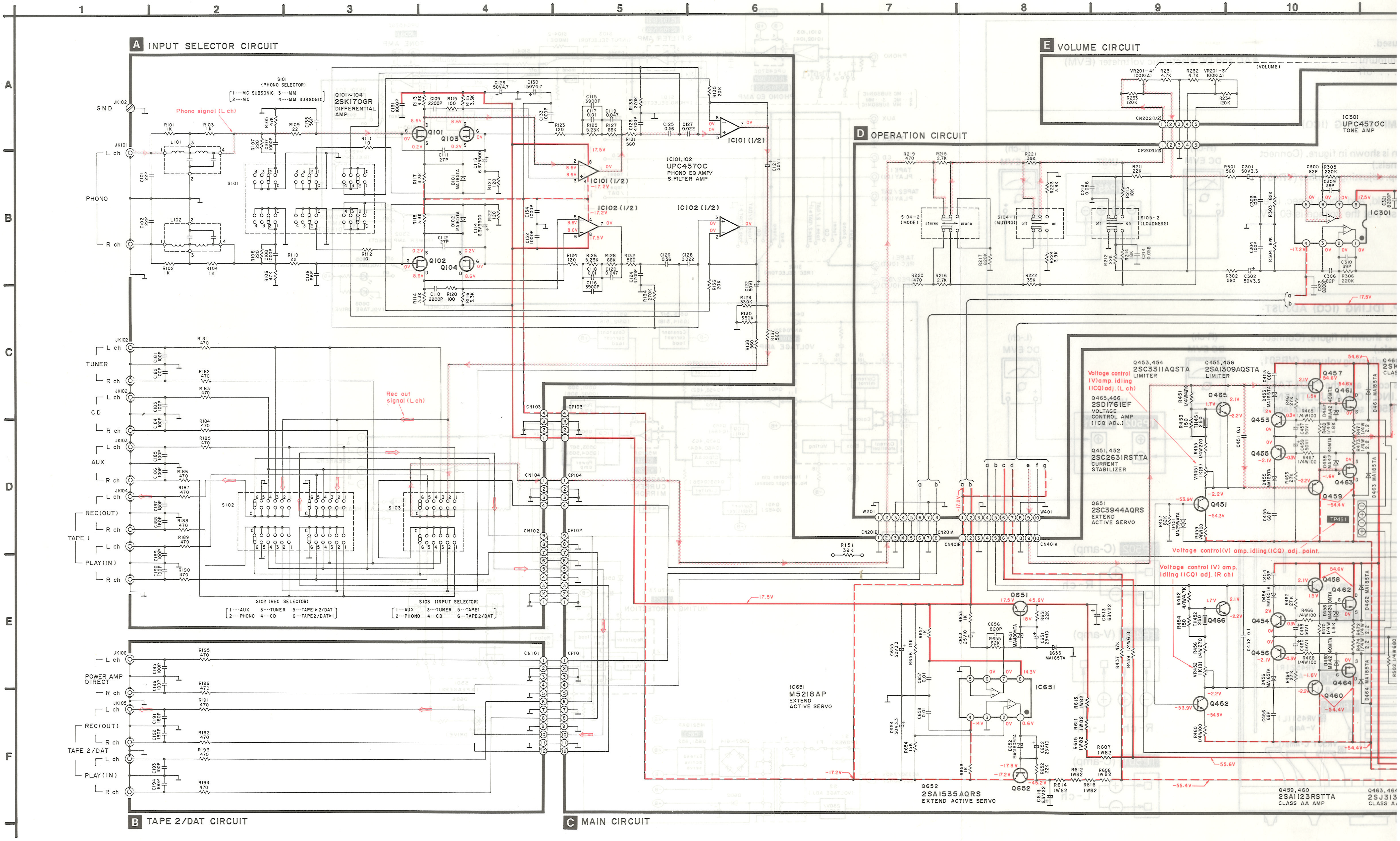
TP501 (C-amp)

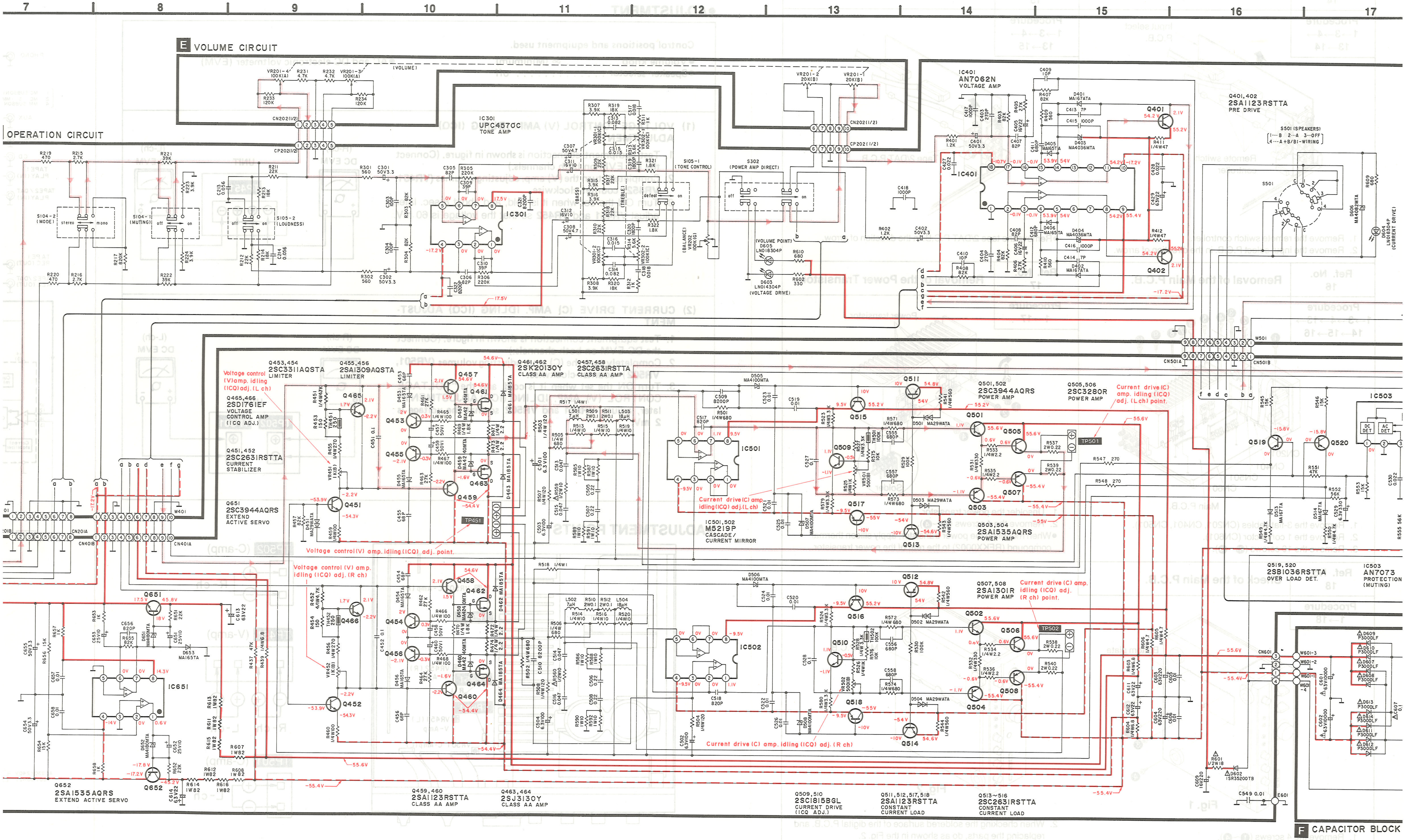


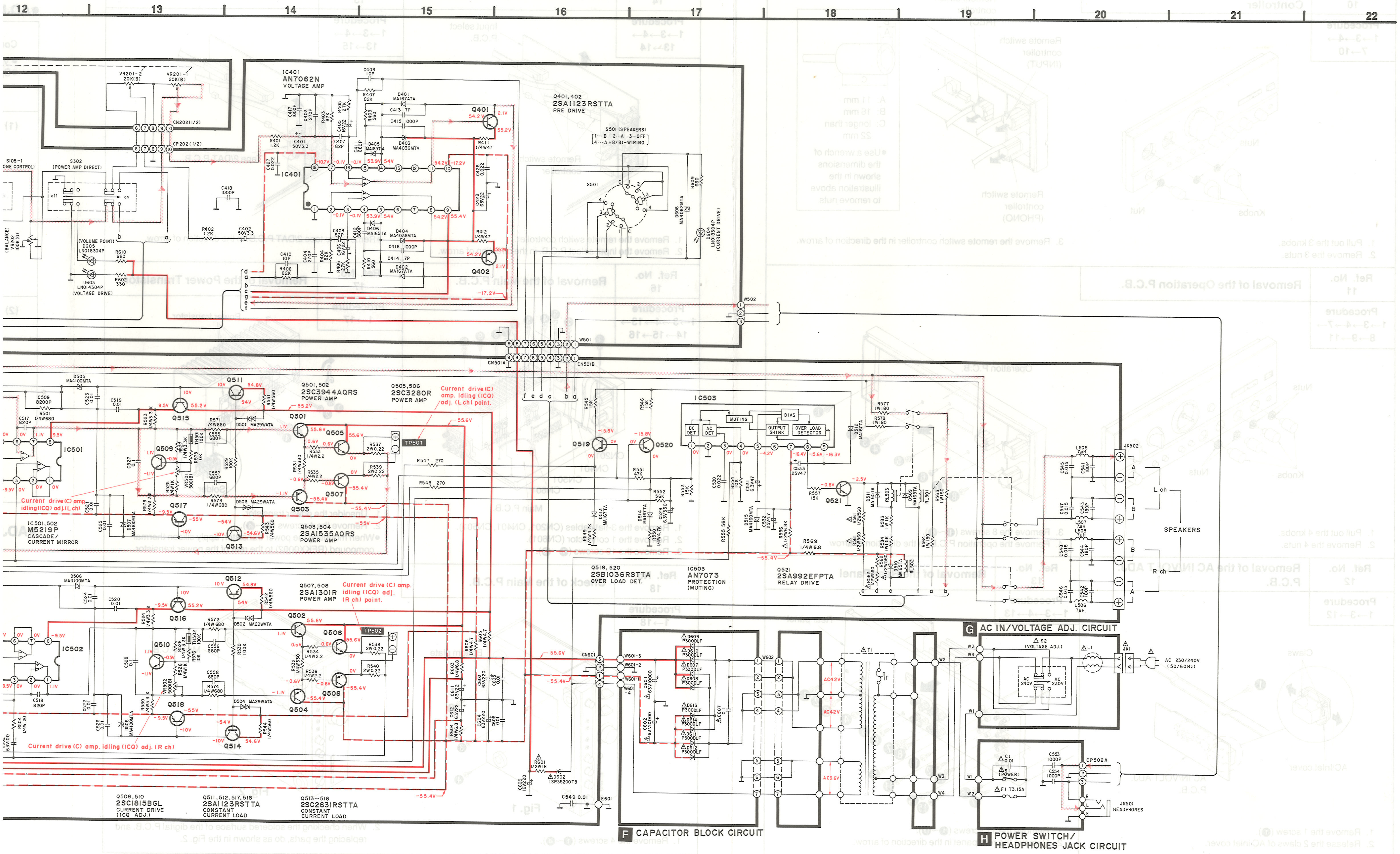
■ BLOCK DIAGRAM


PHONO
RIAA
Q101,103
(Q102,104)
UPC4570C
IC101 (1/2)
(IC102 (1/2))
PHONO EQ AMP
S.FILTER AMP
S101
(PHONO SELECTOR)
1 ··· MC SUBSONIC
2 ··· MC 3 ··· MM
4 ··· MM SUBSONIC
S103
(INPUT SELECTOR)
phono
aux
tuner
CD
tape1
tape2 / DAT
S104-2
(MODE)
stereo
mono
Rch
S104-1
(MUTING)
off
on
S105-2
(LOUDNESS)
(LOUDNESS)
VR201-4
(VOLUME)
UPC4570C
IC301
TONE AMP
VR301, 302
Treble
Bass
defeat
S105-1
(TONE CONTROL)
VR202
(BALANCE)
AUX
TUNER
CD
TAPE1 PLAY(IN)
TAPE2 / DAT PLAY(IN)
TAPE1 REC(OUT)
TAPE2/DAT REC(OUT)
S102
(REC SELECTOR)
S302
(POWER AMP DIRECT)
POWER AMP DIRECT
D605
(VOLUME POINT)
D603
(VOLTAGE DRIVE)
VR201-1
(VOLUME)
D401
AN7062N
IC401
VOLTAGE AMP
Current mirror
Cascade
Current stabilizer
Bias
Muting
Q401
( ) indicates pin No. of right channel.
Q513,517
(Q514,518)
Q511,515
(Q512,516)
Constant current load
Q453(Q454)
Limiter
Q457,461
(Q458,462)
Class AA amp
ICQ adj.
Q465
(Q466)
Q459,463
(Q460,464)
Q455(Q456)
Q451
(Q452)
M5219P
IC501
(IC502)
CASCADE / CURRENT MIRROR
Q501,505
(Q502,506)
Power amp
Q509
(Q510)
Q503,507
(Q504,508)
Brige network
N.F.B
SPEAKERS
A
B
HEADPHONES
Q519(Q520)
Over load det.
D512
AN7073
IC503
MUTING / PROTECTION
Regulator
Over load det.
Muting
DC det.
AC det.
Q521
Relay drive
RL502
RL501
RL503
D510
D509
D511
S501
(SPEAKERS)
D606
D604
(CURRENT DRIVE)
S1
(POWER)
F1
T1
D607~614
M5218AP
IC651
Q651,652
Extend active servo
D602
AC 230/240V
(50/60Hz)
S2
(VOLTAGE ADJ.)
230V/240V
+B
-B

■ SCHEMATIC DIAGRAM (Parts list on pages 23~26.)


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
A INPUT SELECTOR CIRCUIT
B TAPE 2/DAT CIRCUIT
C MAIN CIRCUIT
D OPERATION CIRCUIT
E VOLUME CIRCUIT
S101 (PHONO SELECTOR)
1---MC SUBSONIC 3---MM
2---MC 4---MM SUBSONIC
Q101~104 2SK170GR DIFFERENTIAL AMP
IC101,102 UPC4570C PHONO EQ AMP/ S.FILTER AMP
IC101 (1/2)
IC102 (1/2)
Phono signal (L ch)
Rec out signal (L ch)
GND
PHONO
TUNER
CD
AUX
TAPE 1
REC(OUT)
PLAY(IN)
POWER AMP DIRECT
TAPE 2/DAT
L ch
R ch
S102 (REC SELECTOR)
1---AUX 3---TUNER 5---TAPE1▷2/DAT
2---PHONO 4---CD 6---TAPE2/DAT▷1
S103 (INPUT SELECTOR)
1---AUX 3---TUNER 5---TAPE1
2---PHONO 4---CD 6---TAPE2/DAT
S104-2 (MODE) stereo mono
S104-1 (MUTING) off on
S105-2 (LOUDNESS) off on
VR201-4 100K(A)
VR201-3 100K(A)
(VOLUME)
IC301 UPC4570C TONE AMP
IC651 M5218AP EXTEND ACTIVE SERVO
Q651 2SC3944AQRS EXTEND ACTIVE SERVO
Q652 2SA1535AQRS EXTEND ACTIVE SERVO
Q453,454 2SC3311AQSTA LIMITER
Q455,456 2SA1309AQSTA LIMITER
Q465,466 2SD1761EF VOLTAGE CONTROL AMP (ICQ ADJ.)
Q451,452 2SC2631RSTTA CURRENT STABILIZER
Q459,460 2SA1123RSTTA CLASS AA AMP
Q463,464 2SJ131 CLASS A
Voltage control (V)amp. idling (ICQ)adj.(L ch)
Voltage control (V) amp. idling (ICQ) adj. (R ch)
Voltage control(V) amp. idling(ICQ) adj. point
TP451
17.5V
-17.2V
-17.5V
8.6V
45.6V
-45.2V
54.6V
-54.4V
-55.4V
-55.6V
CN101 CN102 CN103 CN104
CP101 CP102 CP103 CP104
CN201B CN202(1/2) CP202(1/2) W201 W401
CN201A CN401A CN401B
R151 39K


7
8
9
10
11
12
13
14
15
16
17
E VOLUME CIRCUIT
OPERATION CIRCUIT
VR201-4 100K(A)
R231 4.7K
R232 4.7K
VR201-3 100K(A)
(VOLUME)
R233 120K
R234 120K
CN202(1/2)
CP202(1/2)
IC301 UPC4570C TONE AMP
S104-2 (MODE) stereo mono
S104-1 (MUTING) off on
S105-2 (LOUDNESS) off on
S105-1 (TONE CONTROL) defeat on
S302 (POWER AMP DIRECT) off on
VR301-1 100K(C) (BASS)
VR302-1 100K(C) (TREBLE)
VR202 (BALANCE)
D605 LN01304P (VOLUME POINT)
D603 LN01304P (VOLUME DRIVE)
VR201-2 20K(B)
VR201-1 20K(B)
IC401 AN7062N VOLTAGE AMP
Q401,402 2SA1123RSTTA PRE DRIVE
Q401
Q402
S501 (SPEAKERS) 1---B 2---A 3---OFF 4---A+B/BI-WIRING
D606 MA4082MTA
D604 LN01304P (CURRENT DRIVE)
W501
CN501A
CN501B
Q453,454 2SC3311AQSTA LIMITER
Q455,456 2SA1309AQSTA LIMITER
Q461,462 2SK2013OY CLASS AA AMP
Q457,458 2SC2631RSTTA CLASS AA AMP
Q465,466 2SD1761EF VOLTAGE CONTROL AMP (ICQ ADJ.)
Q451,452 2SC2631RSTTA CURRENT STABILIZER
Q651 2SC3944AQRS EXTEND ACTIVE SERVO
Voltage control (V)amp. idling (ICQ)adj.(L ch)
Voltage control (V) amp. idling (ICQ) adj. point.
Voltage control (V) amp. idling (ICQ) adj. (R ch)
TP451
IC501
IC502
IC501,502 M5219P CASCADE/ CURRENT MIRROR
Current drive(C) amp. idling(ICQ) adj.(L ch)
Current drive (C) amp. idling (ICQ) adj. (R ch)
Q501,502 2SC3944AQRS POWER AMP
Q505,506 2SC3280R POWER AMP
Current drive (C) amp. idling (ICQ) adj. (L ch) point.
Q503,504 2SA1535AQRS POWER AMP
Q507,508 2SA1301R POWER AMP
Current drive (C) amp. idling (ICQ) adj. (R ch) point.
TP501
TP502
IC503
IC503 AN7073 PROTECTION (MUTING)
Q519,520 2SB1036RSTTA OVER LOAD DET.
Q519
Q520
IC651
Q652 2SA1535AQRS EXTEND ACTIVE SERVO
Q459,460 2SA1123RSTTA CLASS AA AMP
Q463,464 2SJ3130Y CLASS AA AMP
Q509,510 2SC1815BGL CURRENT DRIVE (ICQ ADJ.)
Q511,512,517,518 2SA1123RSTTA CONSTANT CURRENT LOAD
Q513~516 2SC2631RSTTA CONSTANT CURRENT LOAD
CN401A
CN401B
CN201A
W401
CN601
W601-1
W601-2
W601-3
E601
C549 0.01
F CAPACITOR BLOCK
C609 P3000LF
C610 P3000LF
C607 P3000LF
C608 P3000LF
C613 P3000LF
C614 P3000LF
C611 P3000LF
C612 P3000LF


12
13
14
15
16
17
18
19
20
21
22
IC401 AN7062N VOLTAGE AMP
Q401,402 2SA1123RSTTA PRE DRIVE
S501 (SPEAKERS) 1---B 2---A 3---OFF 4---A+B/BI-WIRING
VR201-2 20K(B)
VR201-1 20K(B)
CN202(1/2)
CP202(1/2)
S302 (POWER AMP DIRECT)
(VOLUME POINT) D605 LN01830AP
D603 LN01430AP (VOLTAGE DRIVE)
D604 LN01830AP (CURRENT DRIVE)
Q401
Q402
W501
W502
CN501A
CN501B
Q501,502 2SC3944AQRS POWER AMP
Q505,506 2SC3280R POWER AMP
Current drive (C) amp. idling (ICQ) adj. (L ch) point.
Current drive (C) amp. idling (ICQ) adj. (L ch)
IC501,502 M5219P CASCADE/ CURRENT MIRROR
Q503,504 2SA1535AQRS POWER AMP
Q507,508 2SA1301R POWER AMP
Current drive (C) amp. idling (ICQ) adj. (R ch) point.
Current drive (C) amp. idling (ICQ) adj. (R ch)
TP501
TP502
IC501
IC502
IC503
IC503 AN7073 PROTECTION (MUTING)
Q519,520 2SB1036RSTTA OVER LOAD DET.
Q521 2SA992EFPTA RELAY DRIVE
MUTING
BIAS
OUTPUT SHINK
OVER LOAD DETECTOR
DC DET
AC DET
JK502
L ch
R ch
SPEAKERS
Q509,510 2SC1815BGL CURRENT DRIVE (ICQ ADJ.)
Q511,512,517,518 2SA1123RSTTA CONSTANT CURRENT LOAD
Q513~516 2SC2631RSTTA CONSTANT CURRENT LOAD
F CAPACITOR BLOCK CIRCUIT
G AC IN/VOLTAGE ADJ. CIRCUIT
H POWER SWITCH/ HEADPHONES JACK CIRCUIT
S2 (VOLTAGE ADJ.)
AC 240V
AC 230V
AC 230/240V (50/60Hz)
JK1
L1
T1
S1 (POWER)
F1 T3.15A
CP502A
JK501 HEADPHONES
W601
W602
CN601
E601
AC42V
AC42V
AC9.6V

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

•S1	: Power switch in "**on**" position.
•S2	: Voltage selector switch in "**240 V**" position. (230 V/240 V)
•S101	: Phono cartridge selector (PHONO SELECTOR) switch in "**MC**" position.
•S102	: Recording output selector (REC SELECTOR) switch in "**TAPE2/DAT ▶1**" position.
•S103	: Input selector (INPUT SELECTOR) switch in "**TAPE2/DAT**" position.
•S104-1	: Muting (MUTING) switch in "**off**" position.
•S104-2	: Mode selector (MODE) switch in "**stereo**" position.
•S105-1	: Tone control (TONE CONTROL) switch in "**defeat**" position.
•S105-2	: Loudness (LOUDNESS) switch in "**off**" position.
•S302	: Power amplifier direct (POWER AMP DIRECT) switch in "**off**" position.
•S501	: Speaker selector (SPEAKERS) switch in "**off**" position.
———	: Positive voltage line.
– – – –	: Negative voltage line.
⋯⋯	: Phono signal line.
⇨	: Recording output signal line.

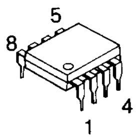
- •Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- •Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

•Caution!

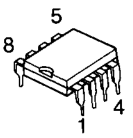
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
Cover the parts boxes made of plastics with aluminum foil.
Ground the soldering iron.
Put a conductive mat on the word table.
Do not touch the legs of IC or LSI with the fingers directly.

•Terminal guide of IC's, transistors and diodes

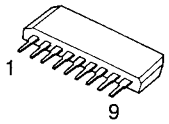
M5218AP

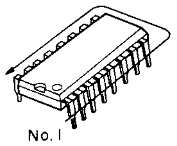


M5219P



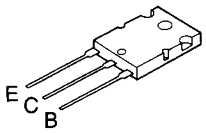
AN7073



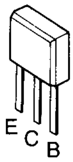


UPC4570C	8 Pin
AN7062N	18 Pin

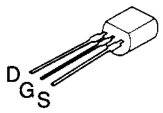
2SA1301R
2SC3280R



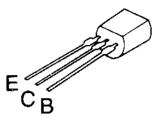
2SA1309AQSTA
2SB1036RSTTA
2SC3311AQSTA



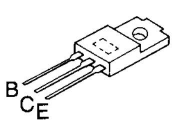
2SK170GR



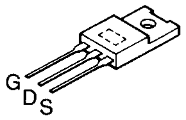
2SA992EFPTA
2SA1123RSTTA
2SC1815BGL
2SC2631RSTTA



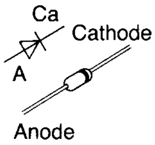
2SA1535AQRS
2SC3944AQRS
2SD1761EF



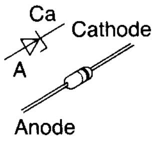
2SK20130Y
2SJ3130Y



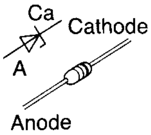
1SR35200TB
MA165TA
MA167TA
MA167ATA
MA29WATA
MA185TA



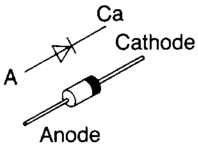
MA4100MTA
MA4160MTA
MA4180MTA
MA4240MTA



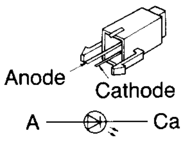
MA4036MTA
MA4082MTA



P300DLF

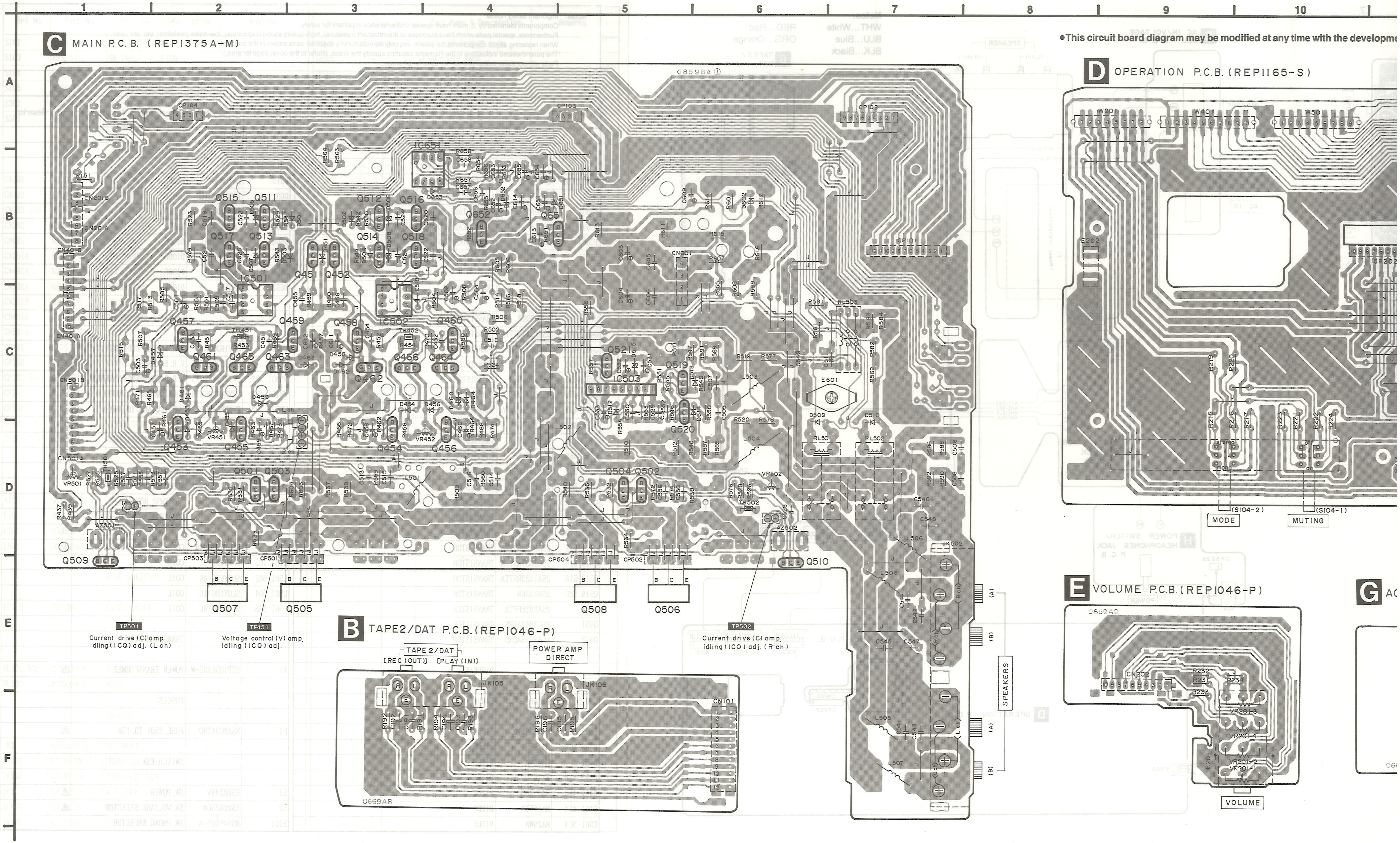


LN014304P
LN018304P



■ PRINTED CIRCUIT BOARDS (Parts list on pages 23~26.)

•This circuit board diagram may be modified at any time with the developme



C MAIN P.C.B. (REP1375A-M)

D OPERATION P.C.B. (REP1165-S)

E VOLUME P.C.B. (REP1046-P)

B TAPE2/DAT P.C.B. (REP1046-P)

G AC

TP501 Current drive (C) amp. idling (ICQ) adj. (L ch)

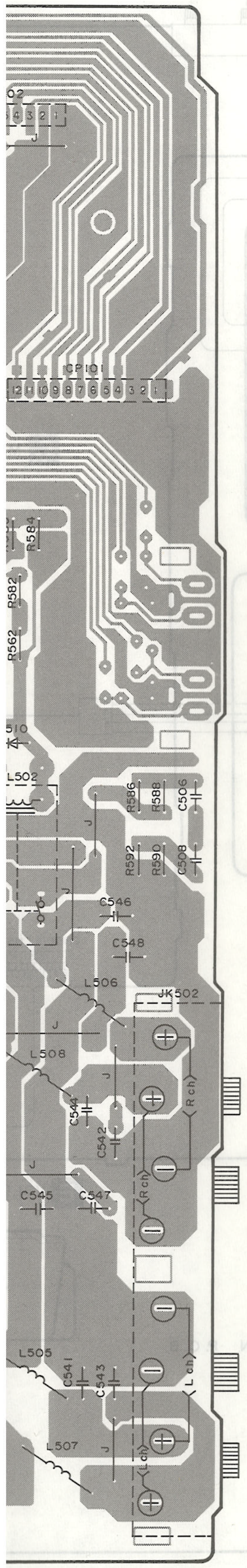
TF451 Voltage control (V) amp. idling (ICQ) adj.

TP502 Current drive (C) amp. idling (ICQ) adj. (R ch)

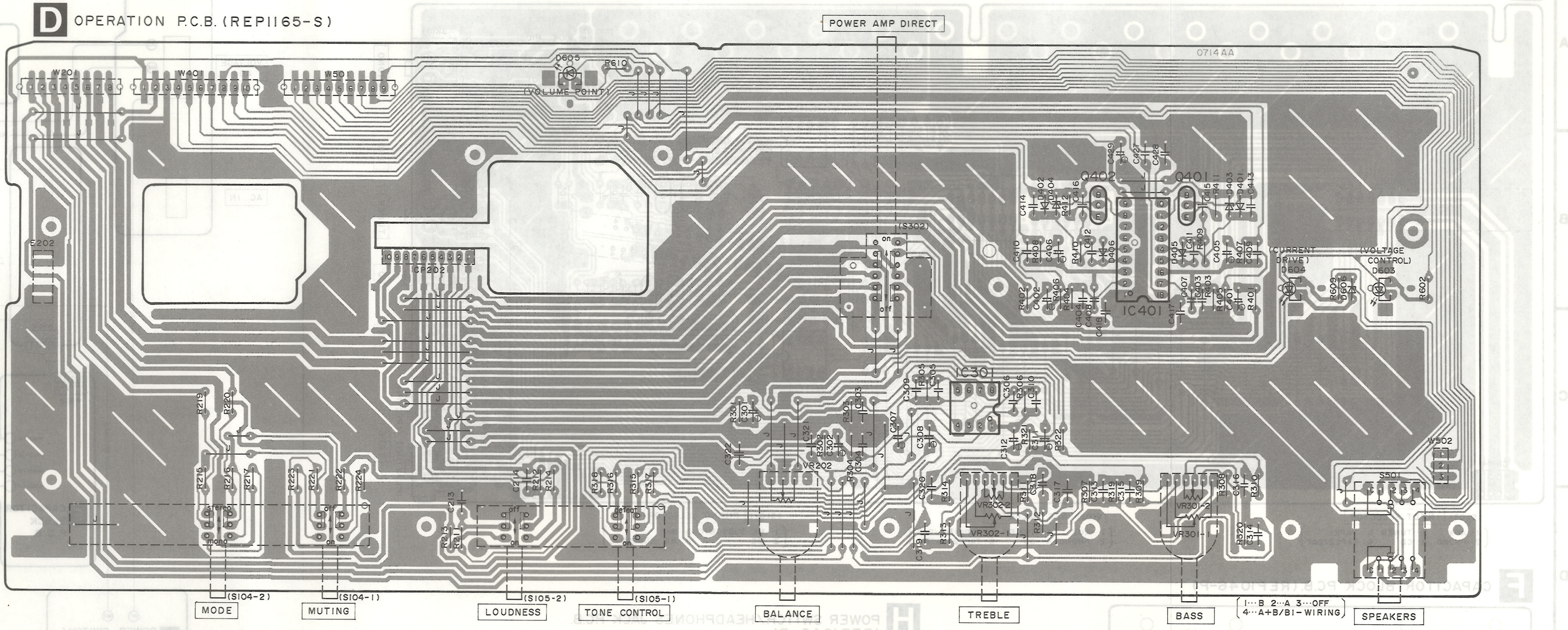
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
0859BA ①
CP104
CP103
CP102
CP101
IC651
IC501
IC502
IC503
Q515
Q511
Q512
Q516
Q517
Q513
Q514
Q518
Q652
Q651
Q451
Q452
Q457
Q459
Q458
Q460
Q461
Q465
Q463
Q466
Q464
Q462
Q453
Q455
Q454
Q456
Q521
Q519
Q520
Q501
Q503
Q504
Q502
Q509
Q510
Q507
Q505
Q508
Q506
CN601
CN201B
CN201A
CN401B
CN401A
CN501B
CN501A
VR501
VR451
VR452
VR502
RL503
RL501
RL502
E601
L502
L501
L503
L504
L505
L506
L507
L508
AZ501
AZ502
TH451
TH452
TH501
TH502
CP503
CP501
CP504
CP502
JK502
L ch
R ch
B C E
(A)
(B)
SPEAKERS
TAPE 2/DAT
[REC (OUT)]
[PLAY (IN)]
POWER AMP DIRECT
JK105
JK106
CN101
0669AB
W201
W401
W501
CP202
E202
(S104-2)
(S104-1)
MODE
MUTING
stereo
mono
off
on
0669AD
CN202
R232
R231
R233
R234
VR201-3
VR201-4
VR201-2
VR201-1
E201
VOLUME

7 8 9 10 11 12 13 14 15 16 17

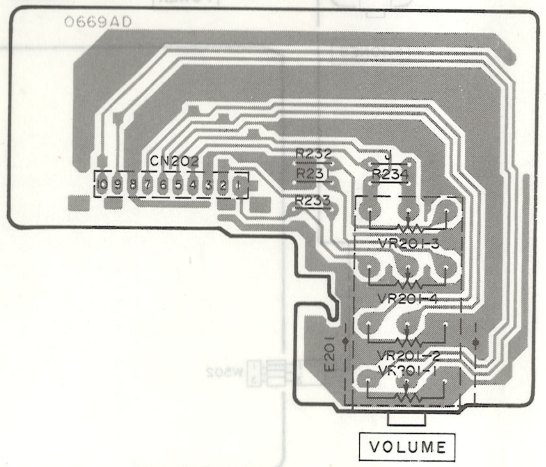
•This circuit board diagram may be modified at any time with the development of new technology.


CP101
R584
R582
R562
L502
R586
R588
C506
R592
R590
C508
C546
C548
L506
JK502
L508
C544
C542
C545
C547
(R ch)
L505
C541
C543
(L ch)
L507
(A)
(B)
(A)
(B)
SPEAKERS

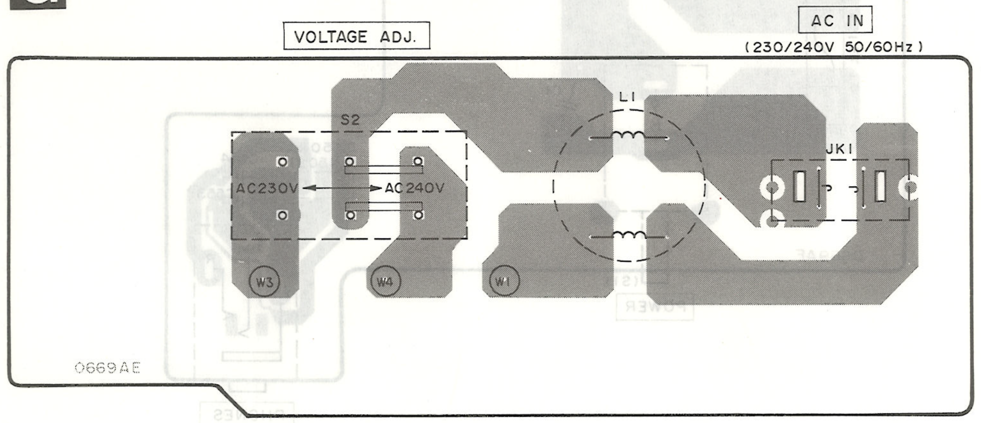
D OPERATION P.C.B. (REP1165-S)


POWER AMP DIRECT
0714AA
W201
W401
W501
D605
R610
(VOLUME POINT)
E202
CP202
IC401
Q401
Q402
(S302)
(CURRENT DRIVE)
D604
(VOLTAGE CONTROL)
D603
IC301
VR202
VR302-2
VR302-1
VR301-2
VR301-1
S501
W502
(S104-2)
(S104-1)
(S105-2)
(S105-1)
MODE
MUTING
LOUDNESS
TONE CONTROL
BALANCE
TREBLE
BASS
1…B 2…A 3…OFF
4…A+B/BI-WIRING
SPEAKERS

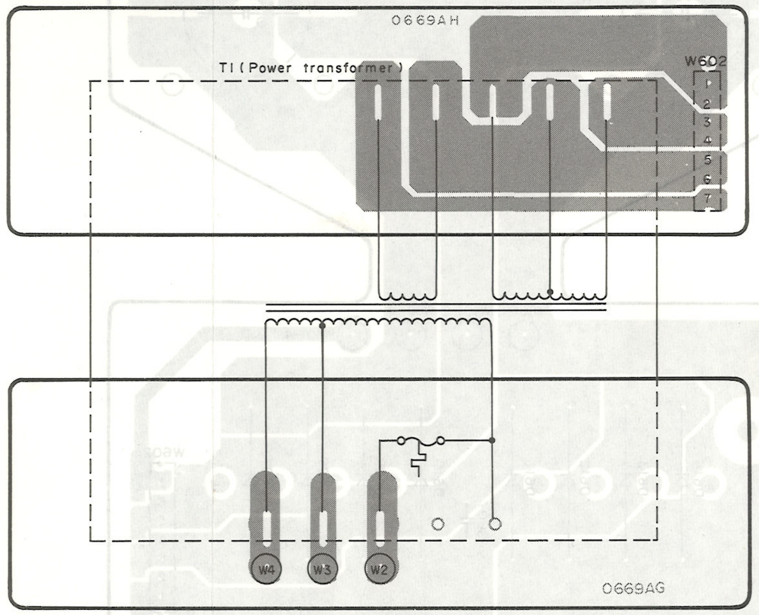
E VOLUME P.C.B. (REP1046-P)


0669AD
CN202
R232
R233
R234
VR201-3
VR201-4
VR201-2
VR201-1
E201
VOLUME

G AC IN/VOLTAGE ADJ. P.C.B. (REP1046-P)


VOLTAGE ADJ.
AC IN
(230/240V 50/60Hz)
S2
AC230V
AC240V
L1
JK1
W3
W4
W1
0669AE

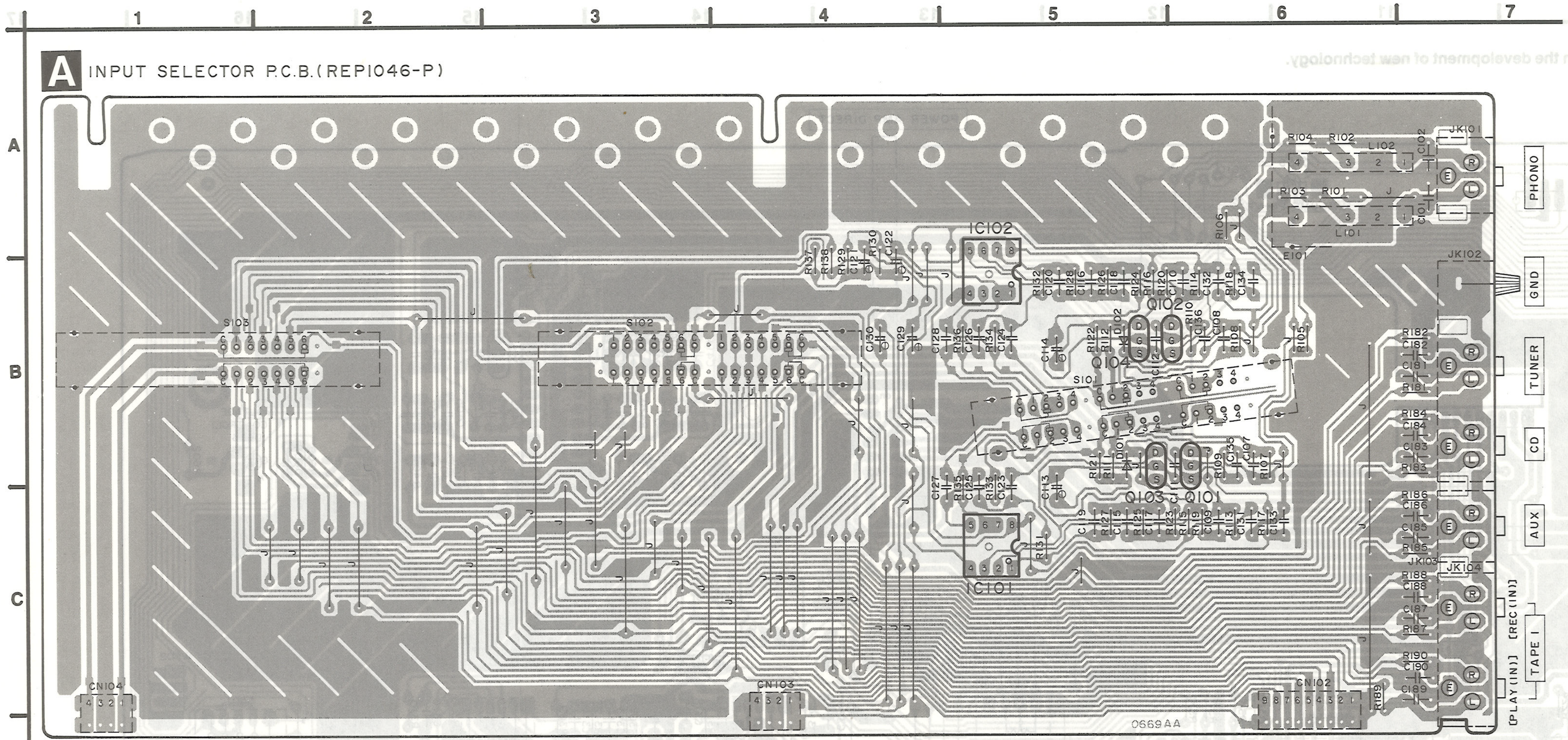
(REP1046-P)


0669AH
T1 (Power transformer)
W602
W4
W3
W2
0669AG

(REP1046-P)

■ PRINTED CIRCUIT BOARDS (Parts list on pages 23~26.)

A INPUT SELECTOR P.C.B. (REP1046-P)

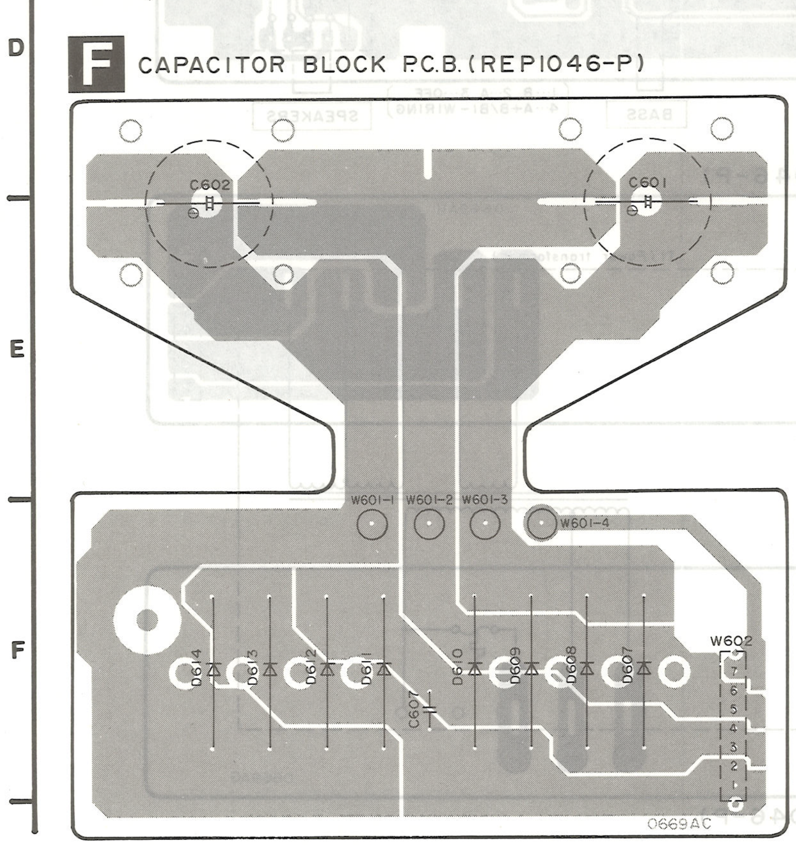

1
2
3
4
5
6
7
A
B
C
PHONO
GND
TUNER
CD
AUX
TAPE I
(REC(IN))
(PLAY(IN))
JK101
JK102
JK103
JK104
IC101
IC102
Q101
Q102
Q103
Q104
S101
S102
S103
CN102
CN103
CN104
L101
L102
E101
0669AA

(S103) INPUT SELECTOR
1···AUX 3···TUNER 5···TAPE1
2···PHONO 4···CD 6···TAPE2/DAT

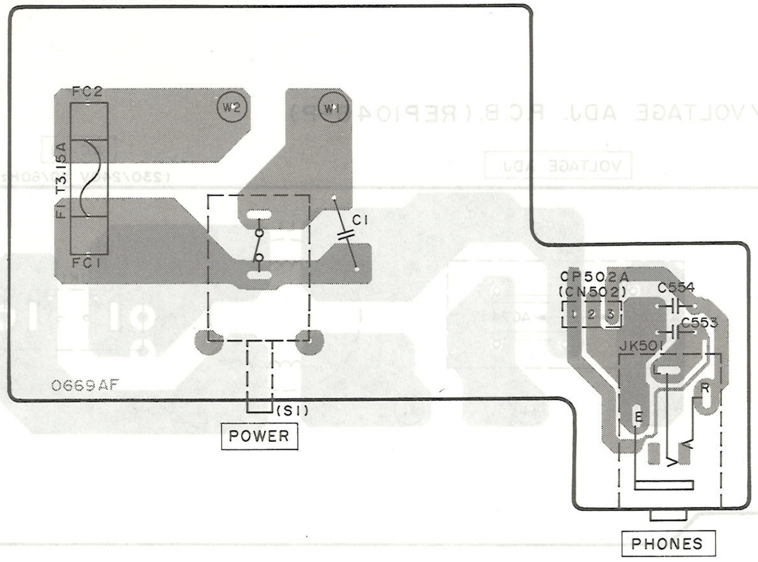
(S102) REC SELECTOR
1···AUX 3···TUNER 5···TAPE1▶2/DAT
2···PHONO 4···CD 6···TAPE2/DAT▶1

(S101) PHONO SELECTOR
1···MC SUBSONIC 3···MM
2···MC 4···MM SUBSONIC

F CAPACITOR BLOCK P.C.B. (REP1046-P)

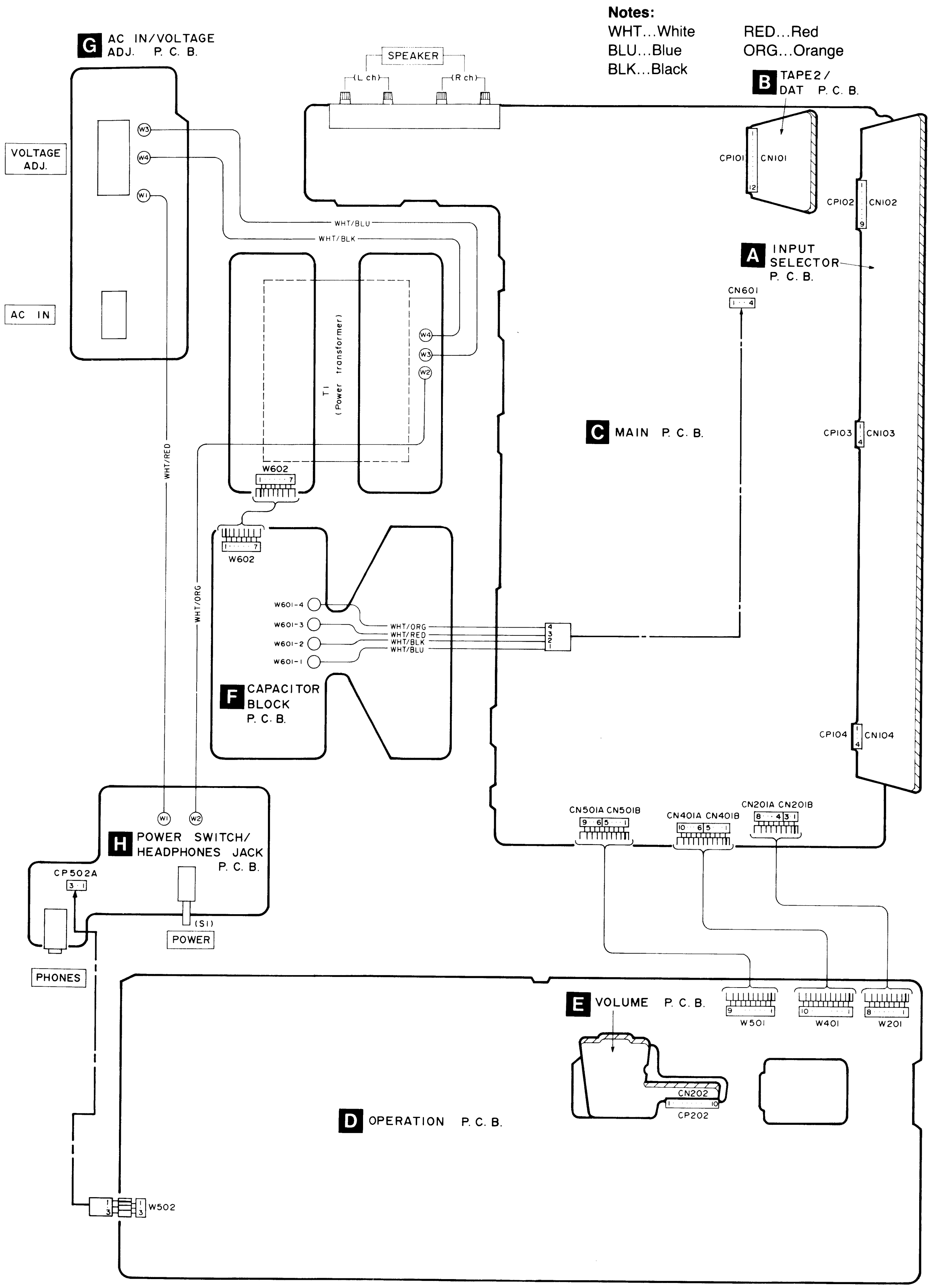

D
E
F
C602
C601
W601-1
W601-2
W601-3
W601-4
W602
D614
D613
D612
D611
C607
D610
D609
D608
D607
0669AC

H POWER SWITCH/HEADPHONES JACK P.C.B. (REP1046-P)


FC2
F1 T3.15A
FC1
W2
W1
C1
(S1)
POWER
CP502A
(CN502)
C554
C553
JK501
PHONES
0669AF

■ WIRING CONNECTION DIAGRAM

Notes:
WHT...White　RED...Red
BLU...Blue　ORG...Orange
BLK...Black


G AC IN/VOLTAGE ADJ. P. C. B.
VOLTAGE ADJ.
AC IN
W3
W4
W1
SPEAKER
L ch
R ch
B TAPE2/DAT P. C. B.
CP101
CN101
CP102
CN102
A INPUT SELECTOR P. C. B.
CN601
WHT/BLU
WHT/BLK
T1 (Power transformer)
W4
W3
W2
C MAIN P. C. B.
CP103
CN103
W602
WHT/RED
WHT/ORG
W601-4
W601-3
W601-2
W601-1
WHT/ORG
WHT/RED
WHT/BLK
WHT/BLU
F CAPACITOR BLOCK P. C. B.
CP104
CN104
CN501A CN501B
CN401A CN401B
CN201A CN201B
W1
W2
H POWER SWITCH/ HEADPHONES JACK P. C. B.
CP502A
(S1)
POWER
PHONES
E VOLUME P. C. B.
W501
W401
W201
CN202
CP202
D OPERATION P. C. B.
W502

■ REPLACEMENT PARTS LIST

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
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*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101, 102	UPC4570C	I. C, PHONO/EQ. AMP.	
IC301	UPC4570C	I. C, TONE AMP.	
IC401	AN7062N	I. C, VOLTAGE AMP.	
IC501, 502	M5219P	I. C, CASCADE/CURRENT MIRROR	
IC503	AN7073	I. C, PROTECTION	
IC651	M5218AP	I. C, EXTEND ACTIVE SERVO	
		TRANSISTOR(S)	
Q101-104	2SK170GR	TRANSISTOR	
Q401, 402	2SA1123RSTTA	TRANSISTOR	
Q451, 452	2SC2631RSTTA	TRANSISTOR	
Q453, 454	2SC3311A-Q	TRANSISTOR	
Q455, 456	2SA1309A-R	TRANSISTOR	
Q457, 458	2SC2631RSTTA	TRANSISTOR	
Q459, 460	2SA1123RSTTA	TRANSISTOR	
Q461, 462	2SK2013OY	TRANSISTOR	
Q463, 464	2SJ313OY	TRANSISTOR	
Q465, 466	2SD1761EF	TRANSISTOR	
Q501, 502	2SC3944AQRS	TRANSISTOR	
Q503, 504	2SA1535AQRS	TRANSISTOR	
Q505, 506	2SC3280R	TRANSISTOR	
Q507, 508	2SA1301R	TRANSISTOR	
Q509, 510	2SC1815BG	TRANSISTOR	
Q511, 512	2SA1123RSTTA	TRANSISTOR	
Q513-516	2SC2631RSTTA	TRANSISTOR	
Q517, 518	2SA1123RSTTA	TRANSISTOR	
Q519, 520	2SB1036R	TRANSISTOR	
Q521	2SA992EFPTA	TRANSISTOR	
Q651	2SC3944AQRS	TRANSISTOR	
Q652	2SA1535AQRS	TRANSISTOR	
		DIODE(S)	
D101, 102	MA165	DIODE	
D401, 402	MA167	DIODE	
D403, 404	MA4036MTA	DIODE	
D405, 406	MA165	DIODE	
D451	MA29WA	DIODE	
D453-456	MA165	DIODE	
D457-460	MA4240H	DIODE	
D461-464	MA185TA	DIODE	
D501-504	MA29WA	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D505-508	MA4100MTA	DIODE	
D509-511	MA165	DIODE	
D512-514	MA167	DIODE	
D515	MA4160M	DIODE	
D602	1SR35200TB	DIODE	⚠
D603	LN014304P	L. E. D.	
D604, 605	LN018304P	L. E. D.	
D606	MA4082MTA	DIODE	
D607-614	P300DLF	DIODE	⚠
D651, 652	MA4180-M	DIODE	
D653	MA165	DIODE	
		VARIABLE RESISTOR(S)	
VR201	RRV16J02A	V. R, VOLUME CONTROL	
VR202	EVJ02QFA2G15	V. R, BALANCE	
VR301, 302	EVJYA1FA2C15	V. R, BASS/TREBLE CONTROL	
VR451, 452	EVNDXAA00B13	V. R, ICQ ADJ. (V-AMP.)	
VR501, 502	EVNDXAA00B52	V. R, ICQ ADJ. (C-AMP.)	
		THERMISTOR(S)	
TH451, 452	ERTD2ZGL251T	THERMISTOR	
TH501, 502	ERTD2ZHL104T	THERMISTOR	
		COIL(S)	
L1	SLQZ650MH49	COIL	⚠
L101, 102	SLM1Z33	COIL	
L501, 502	SLQY07G-40	COIL	
L503, 504	SLQY18G-10	COIL	
L505-508	SLQY07G-40	COIL	
		TRANSFORMER(S)	
T1	RTP1Q5E005-W	POWER TRANSFORMER	⚠
		FUSE(S)	
F1	XBA2C31TB0	FUSE, 250V T3. 15A	⚠
		SWITCH(ES)	
S1	ESB8249V	SW, POWER	⚠
S2	ESD26200A	SW, VOLTAGE SELECTOR	⚠
S101	RSS4F001-A	SW, PHONO SELECTOR	

Ref. No.	
S102	RS
S103	RS
S104	ES
S105	ES
S302	RS
S501	RS
CN101	RJ
CN102	RJ
CN103, 104	RJ
CN202	RJ
CN601	RJ
CN201A	RJ
CN401A	RJ
CN501A	RJ
CN201B	RJ
CN401B	RJ
CN501B	RJ
CP101	RJ
CP102	RJ
CP103, 104	RJ
CP202	RJ
CP501	RJ
CP502	RJ
CP502-504	RJ
AZ501, 502	SU
E101	SM
E201	RS
E601	SN
FC1, 2	EY
RL501, 502	RS
RL503	RS
JK1	SJ
JK101	SJ
JK102	SJ
JK103	SJ
JK104	SJ
JK105	SJ

■ REPLACEMENT PARTS LIST

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Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
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Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101, 102	UPC4570C	I. C, PHONO/EQ. AMP.	
IC301	UPC4570C	I. C, TONE AMP.	
IC401	AN7062N	I. C, VOLTAGE AMP.	
IC501, 502	M5219P	I. C, CASCADE/CURRENT MIRROR	
IC503	AN7073	I. C, PROTECTION	
IC651	M5218AP	I. C, EXTEND ACTIVE SERVO	
		TRANSISTOR(S)	
Q101-104	2SK170GR	TRANSISTOR	
Q401, 402	2SA1123RSTTA	TRANSISTOR	
Q451, 452	2SC2631RSTTA	TRANSISTOR	
Q453, 454	2SC3311A-Q	TRANSISTOR	
Q455, 456	2SA1309A-R	TRANSISTOR	
Q457, 458	2SC2631RSTTA	TRANSISTOR	
Q459, 460	2SA1123RSTTA	TRANSISTOR	
Q461, 462	2SK20130Y	TRANSISTOR	
Q463, 464	2SJ3130Y	TRANSISTOR	
Q465, 466	2SD1761EF	TRANSISTOR	
Q501, 502	2SC3944AQRS	TRANSISTOR	
Q503, 504	2SA1535AQRS	TRANSISTOR	
Q505, 506	2SC3280R	TRANSISTOR	
Q507, 508	2SA1301R	TRANSISTOR	
Q509, 510	2SC1815BG	TRANSISTOR	
Q511, 512	2SA1123RSTTA	TRANSISTOR	
Q513-516	2SC2631RSTTA	TRANSISTOR	
Q517, 518	2SA1123RSTTA	TRANSISTOR	
Q519, 520	2SB1036R	TRANSISTOR	
Q521	2SA992EFPTA	TRANSISTOR	
Q651	2SC3944AQRS	TRANSISTOR	
Q652	2SA1535AQRS	TRANSISTOR	
		DIODE(S)	
D101, 102	MA165	DIODE	
D401, 402	MA167	DIODE	
D403, 404	MA4036MTA	DIODE	
D405, 406	MA165	DIODE	
D451	MA29WA	DIODE	
D453-456	MA165	DIODE	
D457-460	MA4240H	DIODE	
D461-464	MA185TA	DIODE	
D501-504	MA29WA	DIODE	
D505-508	MA4100MTA	DIODE	
D509-511	MA165	DIODE	
D512-514	MA167	DIODE	
D515	MA4160M	DIODE	
D602	1SR35200TB	DIODE	⚠
D603	LN014304P	L. E. D.	
D604, 605	LN018304P	L. E. D.	
D606	MA4082MTA	DIODE	
D607-614	P300DLF	DIODE	⚠
D651, 652	MA4180-M	DIODE	
D653	MA165	DIODE	
		VARIABLE RESISTOR(S)	
VR201	RRV16J02A	V. R, VOLUME CONTROL	
VR202	EVJ02QFA2G15	V. R, BALANCE	
VR301, 302	EVJYA1FA2C15	V. R, BASS/TREBLE CONTROL	
VR451, 452	EVNDXAA00B13	V. R, ICQ ADJ. (V-AMP.)	
VR501, 502	EVNDXAA00B52	V. R, ICQ ADJ. (C-AMP.)	
		THERMISTOR(S)	
TH451, 452	ERTD2ZGL251T	THERMISTOR	
TH501, 502	ERTD2ZHL104T	THERMISTOR	
		COIL(S)	
L1	SLQZ650MH49	COIL	⚠
L101, 102	SLM1Z33	COIL	
L501, 502	SLQY07G-40	COIL	
L503, 504	SLQY18G-10	COIL	
L505-508	SLQY07G-40	COIL	
		TRANSFORMER(S)	
T1	RTP1Q5E005-W	POWER TRANSFORMER	⚠
		FUSE(S)	
F1	XBA2C31TB0	FUSE, 250V T3. 15A	⚠
		SWITCH(ES)	
S1	ESB8249V	SW, POWER	⚠
S2	ESD26200A	SW, VOLTAGE SELECTOR	⚠
S101	RSS4F001-A	SW, PHONO SELECTOR	
S102	RSS6D001	SW, REC SELECTOR	
S103	RSS6B001	SW, INPUT SELECTOR	
S104	ESB68133	SW, MUTING/MODE	
S105	ESB68130	SW, LOUDNESS/TONE	
S302	RSP2D008-A	SW, POWER AMP. DIRECT	
S501	RSR4B004-A	SW, SPEAKER SELECTOR	
		CONNECTOR(S)	
CN101	RJU057W012	SOCKET(12P)	
CN102	RJU057W009	SOCKET(9P)	
CN103, 104	RJU057W004	SOCKET(4P)	
CN202	RJU003K010M1	SOCKET(10P)	
CN601	RJP1A3404	PLUG(4P)	
CN201A	RJS1A1705	SOCKET(5P)	
CN401A	RJS1A1705	SOCKET(5P)	
CN501A	RJS1A1704	SOCKET(4P)	
CN201B	RJS1A1703	SOCKET(3P)	
CN401B	RJS1A1705	SOCKET(5P)	
CN501B	RJS1A1705	SOCKET(5P)	
CP101	RJT057W012-1	CONNECTOR(12P)	
CP102	RJT057W009-1	CONNECTOR(9P)	
CP103, 104	RJT057W004-1	CONNECTOR(4P)	
CP202	RJT003K010-1	CONNECTOR(10P)	
CP501	RJR0081	CONNECTOR	
CP502	RJP3G9YA	CONNECTOR	
CP502-504	RJR0081	CONNECTOR	
		EARTH TERMINAL(S)	
AZ501, 502	SUS227	TRANSISTOR SPRING	
E101	SMC1009	SHIELD PLATE	
E201	RSQ0007-2	SHIELD PLATE	
E601	SNE1004-1	GND PLATE	
		FUSE HOLDER(S)	
FC1, 2	EYF52BC	FUSE HOLDER	⚠
		RELAY(S)	
RL501, 502	RSY0013-0	RELAY	
RL503	RSY0009-0	RELAY	
		JACK(S)	
JK1	SJS9231-1B	AC INLET	⚠
JK101	SJF3068N	PHONO JACK	
JK102	SJF3067N	TUNER/CD JACK	
JK103	SJF3068N	AUX JACK	
JK104	SJF3069N	TAPE 1 JACK	
JK105	SJF3069N	TAPE 2/DAT JACK	
JK106	SJF3068N	POWER AMP. DIRECT JACK	
JK501	QJA0455ZC-A	HEADPHONES JACK	
JK502	RJH4801-1	SPEAKER TERMINAL	
		TEST POINT(S)	
TP451	SJT3409	TEST POINT	
TP501	SJT3209	TEST POINT	
TP502	SJT3209	TEST POINT	

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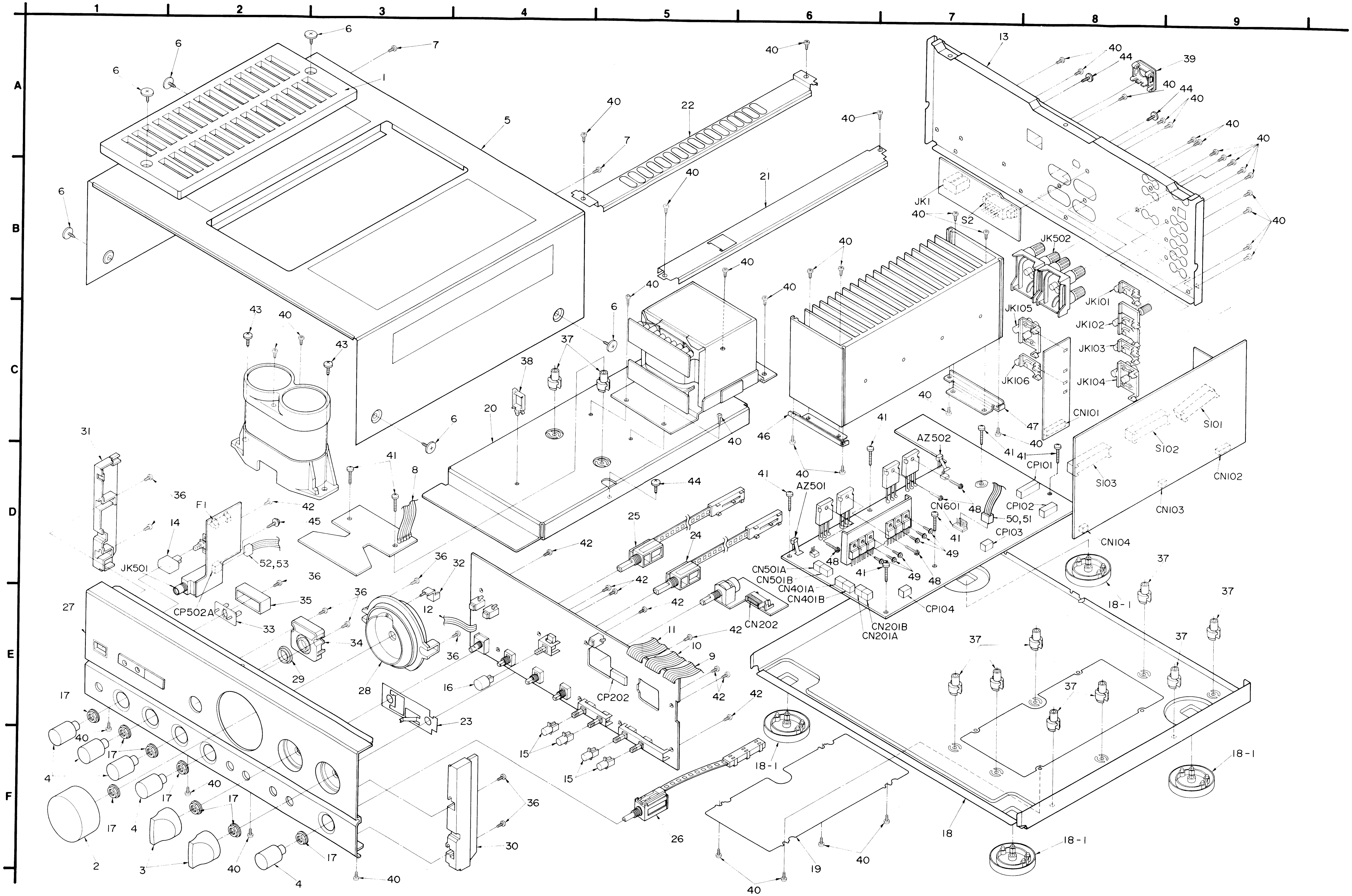
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R101-104	ERDS2TJ102	1/4W 1K
R105, 106	ERDS2TJ473	1/4W 47K
R107, 108	ERDS2TJ221	1/4W 220
R109, 110	ERDS2TJ220T	1/4W 22
R111, 112	ERDS2TJ100	1/4W 10
R113-118	ERDAS3G332T	1/4W 3. 3K
R119, 120	ERDS2TJ101	1/4W 100
R121-124	ERDAS3G121	1/4W 120
R125, 126	EROS2TKF5231	1/4W 5. 23K
R127, 128	EROS2TKG6802	1/4W 68K
R129, 130	ERDS2TJ334	1/4W 330K
R131, 132	ERDAS3G561	1/4W 560
R133, 134	ERDS2TJ274	1/4W 270K
R135, 136	ERDS2TJ203T	1/4W 20K
R137, 138	ERDAS3G561	1/4W 560
R151	ERDS2TJ393	1/4W 39K
R181-196	ERDAS3G471T	1/4W 470
R211, 212	ERDAS3G223T	1/4W 22K
R213, 214	ERDS2TJ183T	1/4W 18K
R215, 216	ERDS2TJ272T	1/4W 2. 7K
R217	ERDS2TJ824	1/4W 820K
R219, 220	ERDAS3G471T	1/4W 470
R221, 222	ERDAS3G393T	1/4W 39K
R223, 224	ERDAS3G392T	1/4W 3. 9K
R231, 232	ERDAS3G472T	1/4W 4. 7K
R233, 234	ERDAS3G124T	1/4W 120K
R301, 302	ERDAS3G561	1/4W 560
R303, 304	ERDS2TJ823T	1/4W 82K
R305, 306	ERDS2TJ224T	1/4W 220K
R307, 308	ERDS2TJ392T	1/4W 3. 9K
R309, 310	ERDS2TJ223	1/4W 22K
R311, 312	ERDS2TJ102	1/4W 1K
R313, 314	ERDS2TJ562	1/4W 5. 6K
R315, 316	ERDAS3G392T	1/4W 3. 9K
R317, 318	ERDAS3G223T	1/4W 22K
R319, 320	ERDS2TJ183T	1/4W 18K
R321, 322	ERDAS3G182	1/4W 1. 8K
R401, 402	ERDS2TJ122	1/4W 1. 2K
R403, 404	ERDS2TJ823T	1/4W 82K
R405, 406	ERDAS3G272T	1/4W 2. 7K
R407, 408	ERDAS3G823T	1/4W 82K
R409, 410	ERDS2TJ561	1/4W 560
R411, 412	ERDFS2VJ470T	1/4W 47
R437	ERDS2TJ473	1/4W 47K
R439	ERDFS2VJ6R8T	1/4W 6. 8
R451, 452	ERDFS2VJ472T	1/4W 4. 7K
R453, 454	ERDS2TJ151	1/4W 150
R455, 456	ERDFS2VJ271T	1/4W 270
R457	ERDS2TJ823T	1/4W 82K
R459, 460	ERDFS2VJ101T	1/4W 100
R461-464	ERDS2TJ273	1/4W 27K
R465-468	ERDFS2VJ101T	1/4W 100
R469, 470	ERDFS2VJ182T	1/4W 1. 8K
R471-474	ERDFS2VJ2R2T	1/4W 2. 2
R501, 502	ERDFS2VJ681T	1/4W 680
R503, 504	ERDFS2VJ121T	1/4W 120
R505, 506	ERDFS2VJ681T	1/4W 680
R507, 508	ERDFS2VJ121T	1/4W 120
R509-512	ERF2EXKR10V	2W 0. 1
R513-516	ERDFS2VJ100T	1/4W 10
R517, 518	ERDFS2VJ1R0T	1/4W 1
R519, 520	ERDFS2VJ100T	1/4W 10
R523, 524	ERDFS2VJ332T	1/4W 3. 3K
R525, 526	ERDFS2VJ102T	1/4W 1K
R527, 528	ERDFS2VJ332T	1/4W 3. 3K
R529, 530	ERDS2TJ104	1/4W 100K
R531, 532	ERDFS2VJ331T	1/4W 330
R533-536	ERDFS2VJ2R2T	1/4W 2. 2
R537-540	ERF2EXKR22V	2W 0. 22
R541-544	ERDFS2VJ561T	1/4W 560
R545, 546	ERDS2TJ153	1/4W 15K
R547, 548	ERDFS2VJ271T	1/4W 270
R549, 550	ERDFS2VJ472T	1/4W 4. 7K
R551	ERDS2TJ473	1/4W 47K
R552	ERDS2TJ563	1/4W 56K
R553	ERDS2TJ153	1/4W 15K
R554	ERDS2TJ103	1/4W 10K
R555	ERDS2TJ563	1/4W 56K
R556	ERDS1FVJ682T	1/2W 6. 8K ⚠
R557	ERDS2TJ153	1/4W 15K
R559, 560	ERDS1FVJ100T	1/2W 10 ⚠
R561, 562	ERDS1FVJ561T	1/2W 560 ⚠
R563, 564	ERG1SJ151E	1W 150
R569	ERDFS2VJ6R8T	1/4W 6. 8
R571-574	ERDFS2VJ681T	1/4W 680
R575, 576	ERDS2TJ103	1/4W 10K
R577, 578	ERG1SJ181E	1W 180
R579, 580	ERDFS2VJ332T	1/4W 3. 3K
R581, 582	ERDS1FVJ561T	1/2W 560 ⚠
R583	ERG1SJ102E	1W 1K
R584	ERG1SJ152E	1W 1. 5K
R585-592	ERG1SJ100E	1W 10
R601	ERDS1FVJ180T	1/2W 18 ⚠
R602	ERDS2TJ331	1/4W 330
R603, 604	ERDFS2VJ6R8T	1/4W 6. 8
R605, 606	ERDFS2VJ4R7T	1/4W 4. 7
R607, 608	ERG1SJ820E	1W 82
R609, 610	ERDS2TJ681	1/4W 680
R611-616	ERG1SJ820E	1W 82
R651, 652	ERDS2TJ223	1/4W 22K
R653	ERDS2TJ102	1/4W 1K
R654	ERDS2TJ153	1/4W 15K
R655	ERDS2TJ823T	1/4W 82K
R656	ERDS2TJ153	1/4W 15K
R657, 658	ERDS2TJ102	1/4W 1K
		CAPACITORS
C1	ECKWNS103ZVS	500V 0. 01U ⚠
C101, 102	ECBT1H220J5	50V 22P
C107, 108	ECQB1H102KF3	50V 1000P
C109, 110	ECQB1H222JF3	50V 2200P
C111, 112	ECBT1H270JU5	50V 27P
C113, 114	ECA0JAP332E	6. 3V 3300U
C115, 116	ECQB1H392JF3	50V 3900P
C117, 118	ECQB1H103JF3	50V 0. 01U
C119, 120	ECQV1H473JZ3	50V 0. 047U
C121, 122	ECA1HPXS010B	50V 1U
C123, 124	ECQB1H472JF3	50V 4700P
C125, 126	ECQV1H564JZ3	50V 0. 56U
C127, 128	ECQB1H223JF3	50V 0. 022U
C129, 130	ECA1HPXS4R7B	50V 4. 7U
C131-134	ECQB1H102KF3	50V 1000P
C135, 136	ECBT1H560J5	50V 56P
C181-186	ECCR1H101K5	50V 100P
C187, 188	ECCR1H181K5	50V 180P
C189, 190	ECCR1H101K5	50V 100P
C191, 192	ECBT1H181KB5	50V 180P
C193-196	ECCR1H101K5	50V 100P
C213, 214	ECQV1H563JZ3	50V 0. 056U
C301, 302	ECA1HPXS3R3B	50V 3. 3U
C303, 304	ECBT1H101KB5	50V 100P
C305, 306	ECBT1H820KB5	50V 82P
C307, 308	ECA1HPXS4R7B	50V 4. 7U
C309, 310	ECBT1H390J5	50V 39P
C311, 312	ECA1CPXS100B	16V 10U
C313, 314	ECQV1H823JZ	50V 0. 082U
C315, 316	ECQB1H153JF3	50V 0. 015U
C317, 318	ECQB1H183JF3	50V 0. 018U
C319, 320	ECQB1H182JF3	50V 1800P
C321, 322	ECQB1H822JF3	50V 8200P
C401, 402	ECA1HPXS3R3B	50V 3. 3U
C403, 404	ECBT1H271KB5	50V 270P
C405, 406	ECA1CPXS220B	16V 22U
C407, 408	ECBT1H820KB5	50V 82P
C409, 410	ECBT1H100J5	50V 10P
C411, 412	ECBA1H681KB5	50V 680P
C413, 414	ECCV2H070D	500V 7P
C415-418	ECBT1H102KB5	50V 1000P
C427, 428	ECQB1H223JF3	50V 0. 022U
C429	ECA1JAP220B	63V 22U
C451, 452	ECBT1H104ZF5	50V 0. 1U
C453-456	ECCV2H680K	500V 68P
C457-460	ECEA1HKA010B	50V 1U
C501-504	ECA0JPXS101B	6V 100U
C505-508	ECQM1H224JZ	50V 0. 22U
C509, 510	ECQB1H822JF3	50V 8200P
C513-516	ECKR1H473ZF5	50V 0. 047U
C517, 518	ECBT1H821KB5	50V 820P
C519-526	ECKR1H103ZF5	50V 0. 01U
C527, 528	ECBT1H104ZF5	50V 0. 1U
C529	ECA0JAP331B	6. 3V 330U
C530	ECFR1E223KR	25V 0. 022U
C531	ECEA0JKA470B	6. 3V 47U
C532, 533	ECEA1EKA4R7B	25V 4. 7U
C541-544	ECCR1H181K5	50V 180P
C545-548	ECQB1H153KF3	50V 0. 015U
C549	ECKR1H103ZF5	50V 0. 01U
C553, 554	ECKT1H102KB	50V 1000P
C555-558	ECBA1H681KB5	50V 680P
C601, 602	ECED1JM103T	63V 10000U ⚠
C603, 604	ECA1JPXS221E	63V 220U
C605, 606	ECHR1H103JZ3	50V 0. 01U
C607	ECQE2104KF3	100V 0. 1U ⚠
C609	ECA1CM221B	16V 220U
C611-614	ECA1JAP220B	63V 22U
C651-653	ECA1EPXS100B	25V 10U
C654, 655	ECA1HPXS3R3B	50V 3. 3U
C656	ECBT1H821KB5	50V 820P
C657, 658	ECKR1H103ZF5	50V 0. 01U

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R101-104	ERDS2TJ102	1/4W 1K
R105, 106	ERDS2TJ473	1/4W 47K
R107, 108	ERDS2TJ221	1/4W 220
R109, 110	ERDS2TJ220T	1/4W 22
R111, 112	ERDS2TJ100	1/4W 10
R113-118	ERDAS3G332T	1/4W 3.3K
R119, 120	ERDS2TJ101	1/4W 100
R121-124	ERDAS3G121	1/4W 120
R125, 126	EROS2TKF5231	1/4W 5.23K
R127, 128	EROS2TKG6802	1/4W 68K
R129, 130	ERDS2TJ334	1/4W 330K
R131, 132	ERDAS3G561	1/4W 560
R133, 134	ERDS2TJ274	1/4W 270K
R135, 136	ERDS2TJ203T	1/4W 20K
R137, 138	ERDAS3G561	1/4W 560
R151	ERDS2TJ393	1/4W 39K
R181-196	ERDAS3G471T	1/4W 470
R211, 212	ERDAS3G223T	1/4W 22K
R213, 214	ERDS2TJ183T	1/4W 18K
R215, 216	ERDS2TJ272T	1/4W 2.7K
R217	ERDS2TJ824	1/4W 820K
R219, 220	ERDAS3G471T	1/4W 470
R221, 222	ERDAS3G393T	1/4W 39K
R223, 224	ERDAS3G392T	1/4W 3.9K
R231, 232	ERDAS3G472T	1/4W 4.7K
R233, 234	ERDAS3G124T	1/4W 120K
R301, 302	ERDAS3G561	1/4W 560
R303, 304	ERDS2TJ823T	1/4W 82K
R305, 306	ERDS2TJ224T	1/4W 220K
R307, 308	ERDS2TJ392T	1/4W 3.9K
R309, 310	ERDS2TJ223	1/4W 22K
R311, 312	ERDS2TJ102	1/4W 1K
R313, 314	ERDS2TJ562	1/4W 5.6K
R315, 316	ERDAS3G392T	1/4W 3.9K
R317, 318	ERDAS3G223T	1/4W 22K
R319, 320	ERDS2TJ183T	1/4W 18K
R321, 322	ERDAS3G182	1/4W 1.8K
R401, 402	ERDS2TJ122	1/4W 1.2K
R403, 404	ERDS2TJ823T	1/4W 82K
R405, 406	ERDAS3G272T	1/4W 2.7K
R407, 408	ERDAS3G823T	1/4W 82K
R409, 410	ERDS2TJ561	1/4W 560
R411, 412	ERDFS2VJ470T	1/4W 47
R437	ERDS2TJ473	1/4W 47K
R439	ERDFS2VJ6R8T	1/4W 6.8
R451, 452	ERDFS2VJ472T	1/4W 4.7K
R453, 454	ERDS2TJ151	1/4W 150
R455, 456	ERDFS2VJ271T	1/4W 270
R457	ERDS2TJ823T	1/4W 82K
R459, 460	ERDFS2VJ101T	1/4W 100
R461-464	ERDS2TJ273	1/4W 27K
R465-468	ERDFS2VJ101T	1/4W 100
R469, 470	ERDFS2VJ182T	1/4W 1.8K
R471-474	ERDFS2VJ2R2T	1/4W 2.2
R501, 502	ERDFS2VJ681T	1/4W 680
R503, 504	ERDFS2VJ121T	1/4W 120
R505, 506	ERDFS2VJ681T	1/4W 680
R507, 508	ERDFS2VJ121T	1/4W 120
R509-512	ERF2EXKR10V	2W 0.1
R513-516	ERDFS2VJ100T	1/4W 10
R517, 518	ERDFS2VJ1R0T	1/4W 1
R519, 520	ERDFS2VJ100T	1/4W 10
R523, 524	ERDFS2VJ332T	1/4W 3.3K
R525, 526	ERDFS2VJ102T	1/4W 1K
R527, 528	ERDFS2VJ332T	1/4W 3.3K
R529, 530	ERDS2TJ104	1/4W 100K
R531, 532	ERDFS2VJ331T	1/4W 330
R533-536	ERDFS2VJ2R2T	1/4W 2.2
R537-540	ERF2EXKR22V	2W 0.22
R541-544	ERDFS2VJ561T	1/4W 560
R545, 546	ERDS2TJ153	1/4W 15K
R547, 548	ERDFS2VJ271T	1/4W 270
R549, 550	ERDFS2VJ472T	1/4W 4.7K
R551	ERDS2TJ473	1/4W 47K
R552	ERDS2TJ563	1/4W 56K
R553	ERDS2TJ153	1/4W 15K
R554	ERDS2TJ103	1/4W 10K
R555	ERDS2TJ563	1/4W 56K
R556	ERDS1FVJ682T	1/2W 6.8K ⚠
R557	ERDS2TJ153	1/4W 15K
R559, 560	ERDS1FVJ100T	1/2W 10 ⚠
R561, 562	ERDS1FVJ561T	1/2W 560 ⚠
R563, 564	ERG1SJ151E	1W 150
R569	ERDFS2VJ6R8T	1/4W 6.8
R571-574	ERDFS2VJ681T	1/4W 680
R575, 576	ERDS2TJ103	1/4W 10K
R577, 578	ERG1SJ181E	1W 180
R579, 580	ERDFS2VJ332T	1/4W 3.3K
R581, 582	ERDS1FVJ561T	1/2W 560 ⚠
R583	ERG1SJ102E	1W 1K
R584	ERG1SJ152E	1W 1.5K
R585-592	ERG1SJ100E	1W 10
R601	ERDS1FVJ180T	1/2W 18 ⚠
R602	ERDS2TJ331	1/4W 330
R603, 604	ERDFS2VJ6R8T	1/4W 6.8
R605, 606	ERDFS2VJ4R7T	1/4W 4.7
R607, 608	ERG1SJ820E	1W 82
R609, 610	ERDS2TJ681	1/4W 680
R611-616	ERG1SJ820E	1W 82
R651, 652	ERDS2TJ223	1/4W 22K
R653	ERDS2TJ102	1/4W 1K
R654	ERDS2TJ153	1/4W 15K
R655	ERDS2TJ823T	1/4W 82K
R656	ERDS2TJ153	1/4W 15K
R657, 658	ERDS2TJ102	1/4W 1K
		CAPACITORS
C1	ECKWNS103ZVS	500V 0.01U ⚠
C101, 102	ECBT1H220J5	50V 22P
C107, 108	ECQB1H102KF3	50V 1000P
C109, 110	ECQB1H222JF3	50V 2200P
C111, 112	ECBT1H270JU5	50V 27P
C113, 114	ECA0JAP332E	6.3V 3300U
C115, 116	ECQB1H392JF3	50V 3900P
C117, 118	ECQB1H103JF3	50V 0.01U
C119, 120	ECQV1H473JZ3	50V 0.047U
C121, 122	ECA1HPXS010B	50V 1U
C123, 124	ECQB1H472JF3	50V 4700P
C125, 126	ECQV1H564JZ3	50V 0.56U
C127, 128	ECQB1H223JF3	50V 0.022U
C129, 130	ECA1HPXS4R7B	50V 4.7U
C131-134	ECQB1H102KF3	50V 1000P
C135, 136	ECBT1H560J5	50V 56P
C181-186	ECCR1H101K5	50V 100P
C187, 188	ECCR1H181K5	50V 180P
C189, 190	ECCR1H101K5	50V 100P
C191, 192	ECBT1H181KB5	50V 180P
C193-196	ECCR1H101K5	50V 100P
C213, 214	ECQV1H563JZ3	50V 0.056U
C301, 302	ECA1HPXS3R3B	50V 3.3U
C303, 304	ECBT1H101KB5	50V 100P
C305, 306	ECBT1H820KB5	50V 82P
C307, 308	ECA1HPXS4R7B	50V 4.7U
C309, 310	ECBT1H390J5	50V 39P
C311, 312	ECA1CPXS100B	16V 10U
C313, 314	ECQV1H823JZ	50V 0.082U
C315, 316	ECQB1H153JF3	50V 0.015U
C317, 318	ECQB1H183JF3	50V 0.018U
C319, 320	ECQB1H182JF3	50V 1800P
C321, 322	ECQB1H822JF3	50V 8200P
C401, 402	ECA1HPXS3R3B	50V 3.3U
C403, 404	ECBT1H271KB5	50V 270P
C405, 406	ECA1CPXS220B	16V 22U
C407, 408	ECBT1H820KB5	50V 82P
C409, 410	ECBT1H100J5	50V 10P
C411, 412	ECBA1H681KB5	50V 680P
C413, 414	ECCV2H070D	500V 7P
C415-418	ECBT1H102KB5	50V 1000P
C427, 428	ECQB1H223JF3	50V 0.022U
C429	ECA1JAP220B	63V 22U
C451, 452	ECBT1H104ZF5	50V 0.1U
C453-456	ECCV2H680K	500V 68P
C457-460	ECEA1HKA010B	50V 1U
C501-504	ECA0JPXS101B	6V 100U
C505-508	ECQM1H224JZ	50V 0.22U
C509, 510	ECQB1H822JF3	50V 8200P
C513-516	ECKR1H473ZF5	50V 0.047U
C517, 518	ECBT1H821KB5	50V 820P
C519-526	ECKR1H103ZF5	50V 0.01U
C527, 528	ECBT1H104ZF5	50V 0.1U
C529	ECA0JAP331B	6.3V 330U
C530	ECFR1E223KR	25V 0.022U
C531	ECEA0JKA470B	6.3V 47U
C532, 533	ECEA1EKA4R7B	25V 4.7U
C541-544	ECCR1H181K5	50V 180P
C545-548	ECQB1H153KF3	50V 0.015U
C549	ECKR1H103ZF5	50V 0.01U
C553, 554	ECKT1H102KB	50V 1000P
C555-558	ECBA1H681KB5	50V 680P
C601, 602	ECED1JM103T	63V 10000U ⚠
C603, 604	ECA1JPXS221E	63V 220U
C605, 606	ECHR1H103JZ3	50V 0.01U
C607	ECQE2104KF3	100V 0.1U ⚠
C609	ECA1CM221B	16V 220U
C611-614	ECA1JAP220B	63V 22U
C651-653	ECA1EPXS100B	25V 10U
C654, 655	ECA1HPXS3R3B	50V 3.3U
C656	ECBT1H821KB5	50V 820P
C657, 658	ECKR1H103ZF5	50V 0.01U

■ CABINET PARTS LOCATION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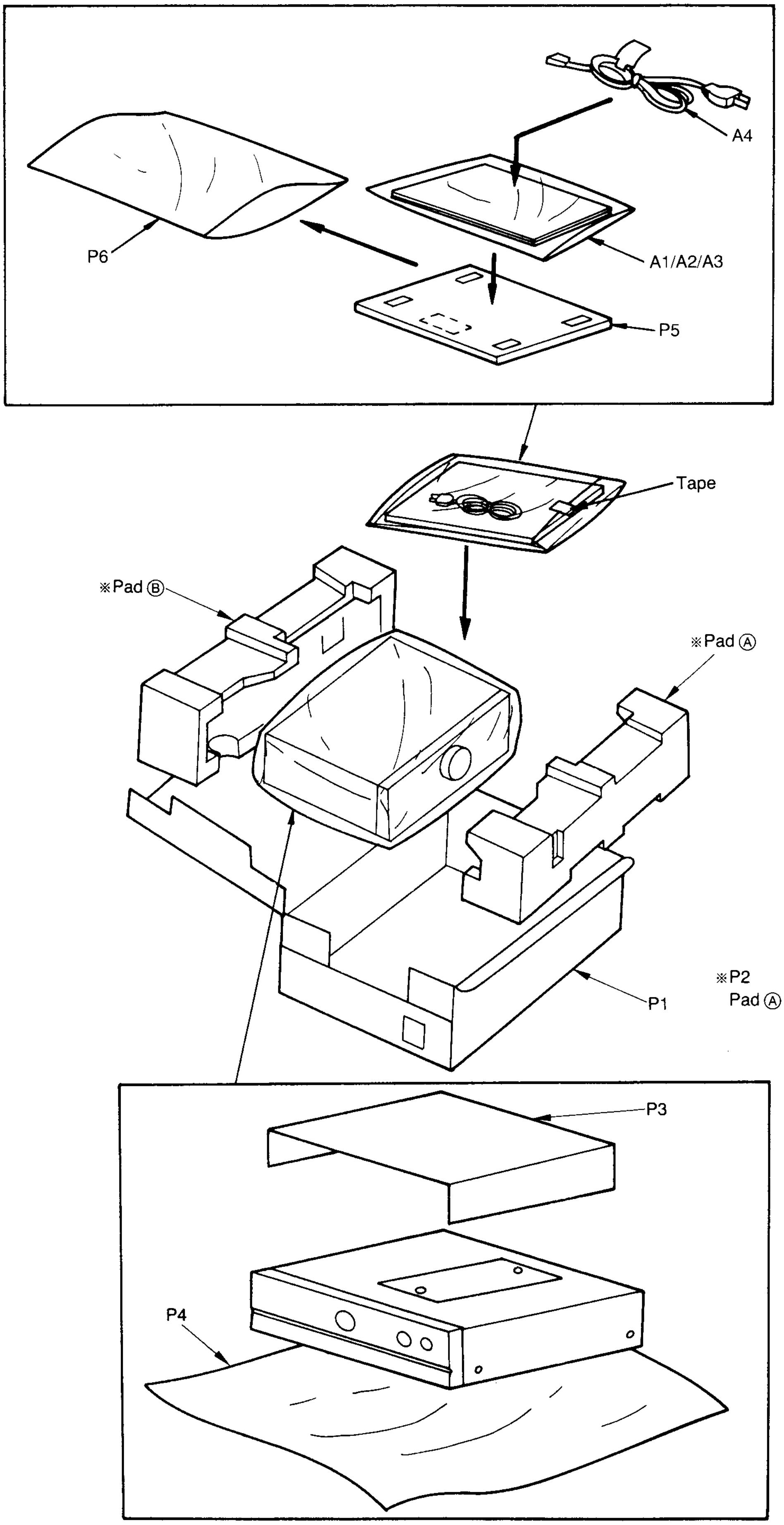
Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RGK0397-K	UPPER PLATE	
2	RGW0122-K	VOLUME KNOB	
3	RGW0123-K	REC. /INPUT KNOB	
4	RGW0150-K	TONE/PHONO/S. P. SELECT KNOB	
5	RKM0172-K	CABINET	
6	SNE2129-3	SCREW	
7	XTBS3+8JFZ1	SCREW	
8	RWJ3907150QQ	FLAT CABLE(7P)(W602)	
9	RWJ3908170QQ	FLAT CABLE(8P)(W201)	
10	RWJ3910170QQ	FLAT CABLE(10P)(W401)	
11	RWJ3909170QQ	FLAT CABLE(9P)(W501)	
12	RWJ3903070XK	FLAT CABLE(3P)(W502)	
13	RGR0124A-E1A	REAR PANEL	(EB)
13	RGR0124A-D1A	REAR PANEL	(EG)
14	RGU0030	POWER BUTTON	
15	RGU0609-K	LOUDNESS/MUTING/MODE BUTTON	
16	RGU0611-K	DIRECT BUTTON	
17	RHN90001	NUT	
18	RFKJUVX800EK	BOTTOM BOARD ASS'Y	
18-1	RKA0009-1	FOOT	
19	RKU0036	BOTTOM PLATE	
20	RMA0476-2	ANGLE	
21	RMA0584	SIDE ANGLE	
22	RMA0585	CENTER ANGLE	
23	RMQ0255-1	PLATE	
24	RSQ0019	REMOTE SWITCH(INPUT)	
25	RSQ0020	REMOTE SWITCH(REC. SEL.)	
26	RSQ0021	REMOTE SWITCH(PHONO)	
27	RFKGUVX820EG	FRONT PANEL ASS'Y	
28	RGK0393-K	VOLUME ORNAMENT	
29	RGK0394-A	RING	
30	RGK0398-K	SIDE ORNAMENT(R)	
31	RGK0399-K	SIDE ORNAMENT(L)	
32	RGL0136-C1	ORNAMENT	
33	RGL0164-C	ORNAMENT	
34	RMR0460-K	HOLDER	
35	RMR0461-K	HOLDER	
36	XTBS26+8J	SCREW	
37	SHE187-2	P. C. B. SPACER	
38	SHR9814	CLUMPER	
39	SJS9231A	AC INLET COVER	
40	XTBS3+8JFZ1	SCREW	
41	XTB3+20JFZ	SCREW	
42	XTBS26+8J	SCREW	
43	XTB4+10FFZ	SCREW	
44	XTB4+8FFZ	SCREW	
45	XTWS3+8T	SCREW	
46	RMQ0239	ANGLE	
47	RMQ0240	ANGLE	
48	SNE2117-1	SCREW	
49	XTB3+8JFZ	SCREW	
50	RJS1A3404	SOCKET(4P)	
51	RJT053	TERMINAL	
52	SJS5331	SOCKET(3P)	
53	SJT783	TERMINAL	
		PACKING MATERIALS	
P1	RPG1214	PACKING CASE	
P2	RPN0511-1	PAD	
P3	SPH223	PROTECTION SHEET(A)	
P4	SPH6434	PROTECTION SHEET(B)	
P5	RPQ0164	ACCESSORIES BOX	
P6	XZB24X34C04	PROTECTION COVER(ACCESSORY)	
		ACCESSORIES	
A1	RFKSUVX820EG	INSTRUCTIONS MANUAL	(EG)
A1	RQT1486-B	INSTRUCTIONS MANUAL	(EB)
A2	RQA0013	WARRANTY CARD	
A3	RQCB0169	SERVICE CENTER LIST	
A4	SJA193	AC POWER SUPPLY CORD	⚠(EB)
A4	RJA0019-1K	AC POWER SUPPLY CORD	⚠(EG)

■ PACKAGING


A4
A1/A2/A3
P6
P5
Tape
※Pad Ⓑ
※Pad Ⓐ
P1
P3
P4

※P2
Pad Ⓐ Ⓑ Ass'y: RPN0511-1